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THE INFLUENCE OF TREATMENT AND REST ON GONORRHŒA.

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(From the Records of No. 3 Clinic, Langwarrin, Victoria.)

Large numbers of cases of gonorrhœa require to be dealt with in order that a sufficient number may be obtained for results to be compared.

The above institution offered unusual opportunities for such observations, and this paper is based on a study of 365 acute cases treated during a prolonged period of duty in 1916. Many more cases were actually dealt with, but many patients were not seen throughout for various reasons; some were transferred to other States before their treatment was complete, others absconded and many were lost sight of during an interruption in duty.

Difficulty is experienced in estimating the relative value of different forms of treatment on account of the large variety of cases that are presented and the stages reached when first seen. It is obviously misleading to compare cases of first infection with those in men who have suffered a number of attacks; or men coming under treatment within a few days of infection with men who have received no treatment for many days; or cases that have run a simple course with those that have developed complications; or cases of subsiding disease with others of disease at its height.

The great majority of cases were of first attack and these only have been used for comparison, as cases of second third and fourth attacks were not sufficiently numerous to allow of comparison after all ineligible cases had been excluded.

The only common complication met with affecting the duration of the disease was epididymitis, and the frequency of its occurrence during the treatment is one of the factors on which the value of any scheme of treatment is estimated.

All cases compared here were cases of first attack, of seven days' duration, or less, on admission, coming under observation with a purulent gonococcal urethritis bacteriologically diagnosed.

Series I., involving patients who were infected in Egypt, is an exception to the above, in that most of the cases were not bacteriologically diagnosed; but the patients all came under treatment in Egypt within seven days of onset.

The comparative value of the treatment in the different series is based on:—

(*a*) The percentage of cases of first attack in which epididymitis developed during treatment.

(*b*) The time taken to effect a cure in those cases of first attack in which epididymitis did not develope.

It is by consideration of these results that the relative value of any system of treatment is estimated. Epididymitis doubles the duration of the disease. From the two results is obtained the average duration of all cases of first attack, including cases of epididymitis; in this way the comparative cost to the State of treatment in the various series is indicated.

It is to be noted that a system of treatment designed to avoid complications (epididymitis), may raise the average time taken to effect a cure in a given series in two ways:—

Firstly, the treatment would be less drastic and so somewhat prolong the simpler cases that might safely be treated more rigorously if it were possible to select such cases early.

Secondly, by avoiding complications (epididymitis) in the more severe cases in which epididymitis might reasonably be expected to develope, such cases come to be classed with those that have not developed complications.

Conversely in another series risks might be taken, resulting in a lessened period of treatment by those escaping complications, but producing an increase in the number of cases of epididymitis.

It will be inferred from the foregoing that more severe forms of treatment tend to produce complications (epididymitis).

A good system of treatment, therefore, must be designed to cure the urethritis in the shortest period compatible with avoidance of complications.

Two conclusions stand out on consideration of these cases; one is the importance of resting the patient and the other the danger of ordering urethro-vesical irrigation at an early stage of the disease.

The standard of cure was absence of urethral discharge and a clear urine. Examinations were made at 6.30 a.m. twice weekly. Absence of discharge was demonstrated by a trained orderly expressing the urethra from the perineum forwards. If discharge were obtained no further examination was made and the treatment was continued; but if no discharge were detected, the urine was examined for shreds and fraud eliminated by a specimen of at least 0.4 litres being insisted on, as an early flushing of the urethra prior to examination would disguise signs of disease. If such an examination showed a patient apparently cured, treatment was discontinued and a similar examination made four days later. If a similar result were obtained, no further treatment was given and two or three days later the patient was examined clinically and bacteriologically and discharged if no evidence of disease were found.

Such a standard of cure is very high and much beyond that usually observed, or possible, in civil practice; so much so that one believes that if it were possible to insist on such a standard generally, there would be little evidence of prolonged infectivity after the disease, latency and incurability.

The interval between the date on which a patient believed himself cured, and that on which the medical officer thought he was probably cured, was considerable; and were the decision in the hands of the

patient, as has been the case in civil practice, treatment would have been discontinued in most cases weeks before it should have been.

It occasionally happened that for special reasons men were discharged to their training camps before they had reached the standard of cure referred to, but almost invariably they were returned in a very brief period with recurrence. This also occurred with patients who had procured their discharge by fraud or accident. It is one thing for a patient to cease treatment when he pleases, but a very different matter for an enlisted man to be required to pass a searching examination by a medical officer on rejoining his unit.

It is doubtful if the treatment recorded here were superior to that carried out by the average practitioner in civil practice, but the great value of the hospital lay in the facilities for examination and in the power to insist on and supervise treatment until a satisfactory result had been obtained.

The evolution of the camp may be traced through succeeding series of cases. As conditions improved, treatment and the supervision of treatment became better with corresponding results; but as time went on and discipline hardened, greater calls were made on the men for fatigue and guard duty, with a corresponding disturbance of the rest element.

In considering the following series the advantages or disadvantages of the various forms of treatment will be discussed as they arise.

There are nine series of cases arranged in three groups as below. In Group A. the stay in hospital is prolonged and the percentage of cases of epididymitis considerable. Group B. shows a great improvement in most of the series in one or other or all the factors on which the value of treatment is based. Group C. shows the elimination of epididymitis as the result of a system of treatment which exceeded in duration by a few days only the best series in Group B.

	Percentage Developing Epididymitis.	Average Duration of Uncomplicated Cases of First Attack.	Average Duration of all Cases of First Attack.
GROUP A.			
Series I. ..	18%	.. 110 days	.. 135 days
Series II. ..	21%	.. 95 days	.. 131 days
GROUP B.			
Series III...	10.5%	.. 50 days	.. 66 days
Series IV...	10.0%	.. 54 days	.. 68 days
Series V. ..	12.5%	.. 110 days	.. 124 days
Series VI...	3.0%	.. 58 days	.. 61 days
GROUP C.			
Series VII...	Nil	.. 160 days	.. 160 days
Series VIII.	Nil	.. 81 days	.. 81 days
Series IX...	Nil	.. 68 days	.. 68 days

Group A.

Series I. and II. are dealt with in this group. At this time the camp was not well organized and, although a good routine treatment was laid down, very little supervision was possible and individual attention was almost out of the question. This group is characterized by the prolonged treatment required to effect a cure and the compartively high incidence of epididymitis. The patients of Series I. received their early treatment in Egypt. All other patients dealt with in this paper were treated throughout at Langwarrin.

SERIES I.

82 men were infected in Egypt.
66 cases were of first attack.
29 are, apart from the absence of bacteriological diagnosis, available for comparison as to duration.

Treatment.—Poor (at first). Injections and medicine in Egypt and on voyage to Australia. Urethro-vesical irrigation, prostatic massage and medicine at Langwarrin.

Rest.—Fair.

Supervision.—Bad.

Diet.—Bad. Ordinary rations.

Results.—(*a*) In 18% of the cases of first attack epididymitis developed. (*b*) The average duration of the cases of first attack in which epididymitis did not develope, was 110 days. (*c*) The average duration of all cases of first attack was 135 days.

The early treatment of these patients was carried out in Egypt and on troopship *en route* to Australia. It was necessarily carried out under great disadvantages and was of a simple character, urethral injections and medicine. Facilities would not allow of even this treatment being given continuously and well supervised, but the men were under good conditions as to rest.

On entering camp here they were given urethro-vesical irrigation of potassium permanganate (1 in 8,000) twice daily, prostatic massage twice weekly, and *haustus santali* three times a day. Conditions as to rest were good, as they were not called upon to do duty. Facilities did not allow of good supervision. A few patients received some vaccine, but no attempt could be made to give a full course of such treatment in any case.

The results obtained, a duration of 110 days in cases in which epididymitis did not develope and 18% of epididymitis, would be regarded as satisfactory when the difficulties met with in attempting to carry out treatment are considered and the fact that, according to statistics, in 25% of cases epididymitis developes.

It was thought that the prolonged period taken to effect cure was due to the want of efficient treatment in the early stages of the disease and that when the men infected in Australia came to be considered, greatly improved results would be found.

SERIES II.

72 patients infected in Australia.
61 of the cases were of first attack.
21 of the latter are available for comparison as to duration, *i.e.*, were bacteriologically diagnosed, were admitted within a week of onset with a purulent discharge, and did not develope epididymitis.

Treatment.—Good. Urethro-vesical irrigation, prostatic massage and medicine.

Rest.—Fair.

Supervision.—Bad.

Diet.—Bad. Ordinary rations.

Results.—(*a*) In 21% of the cases of first attack epididymitis developed. (*b*) The average duration of the cases of first attack in which epididymitis did not develope, was 95 days. (*c*) The average duration of all cases of first attack was 131 days.

These cases within a week or less of infection entered upon the course of treatment mentioned in Series I.. It was not possible to attempt any graduation in strength of the irrigating solutions, or to have much supervision. A very good routine system of treatment was available, if the patient desired to take

advantage of it, but facilities would not allow of it being enforced. Conditions as to rest were good, as the men did no duty. There was very little vaccine given.

In the early cases patients were instructed to practise anterior urethral irrigation and not to go on to urethro-vesical irrigation until so instructed; but it was soon found that, from a mistaken notion of treating themselves more thoroughly, they commenced urethro-vesical irrigation at a very early period, if not from the first.

That the stay in hospital was not reduced by more than fifteen days, as compared with Series I., was attributed to the want of supervision and to the difficulty in picking out individual cases on account of the large number of patients each medical officer had to deal with; but it was difficult to account at the time for the percentage of cases developing epididymitis being higher than in the Egyptian series, since, on the whole, the early treatment of Series II. appeared to be much better than that of Series I. (Egyptian). Consideration later on showed that the comparatively large percentages of cases of epididymitis was almost certainly due to the practice of early urethro-vesical irrigation.

Group B.

This group comprises Series III., IV., V. and VI.. All the patients were infected in Australia. A new camp and hospital had been laid out and the organization had greatly improved.

Efforts were directed at first, mainly towards reducing the duration of stay in hospital, as the incidence of epididymitis in the preceding series was accepted as being below the average and was considered to be satisfactory. But, as the different series developed, it became obvious that the onset of epididymitis was much influenced by treatment. The effect of improved supervision also was evident in this group and the various series demonstrated that an excellent therapy will not compensate for want of rest, nor will almost ideal conditions as to rest obviate the danger of early urethro-vesical irrigation.

Series III.

90 patients infected in Australia.
76 of the cases were of first attack.
20 of the latter are available for comparison as to duration.
Treatment.—Good. Urethro-vesical irrigation, prostatic massage and vaccine (a little).
Rest.—Fair.
Supervision.—Good.
Diet.—Bad. Ordinary rations.
Results.—(*a*) In 10.5% of the cases of first attack epididymitis devedoped. (*b*) The average duration of the cases of first attack in which epididymitis did not develope, was 50 days. (*c*) The average duration of all cases of first attack was 66 days.

The routine treatment was the same as in Series II., except that the irrigations were graduated in strength. The new plant made it difficult to carry out anterior urethral irrigation and urethro-vesical irrigation was practised from the first in all cases. The organization had so improved that regular attendance on treatment could be insisted upon, but the supervision of the treatment itself was not good. The irrigation solution used was potassium permanganate (1 in 8,000). This was used until the discharge became muco-purulent; if the purulent discharge were unduly prolonged peroxide of hydrogen (10 vol. per cent.) was used. When the discharge became muco-purulent, the potassium permanganate solution was increased to 1 in 4,000, 1 in 2,000 and 1 in 1,000, at fortnightly intervals; if further treatment were necessary strong solutions of zinc sulphate or weak solutions of silver nitrate were used in the same way.

About a third of these patients were given vaccine, but in no case was a complete course given, nor was any improvement shown over those untreated by vaccine.

For reasons of economy the medicine used was now a mixture of *haustus santali* and *haustus copaibæ* and the alteration was neither beneficial nor harmful.

Conditions as to rest were less good here than in previous series, as a certain amount of guard duty and light fatigue work was carried out by the patients; but, as such work was subject to the medical officer's approval, it probably did no serious harm since none of the patients was allowed to do it until the purulent stage had passed.

The reduction of stay in isolation and of complications by 50% was very satisfactory; but the series is a large one and towards its completion the opinion was formed that the 10% of epididymitis, although a great improvement on former series, was too high. As the other conditions were good, it was suspected to be attributable to the use at an early stage of urethro-vesical irrigation, instead of anterior urethral irrigation.

Series IV.

28 patients infected in Australia.
All of the cases were of first attack.
11 are available for comparison as to duration.
Treatment.—Excellent. Anterior urethral irrigation and injections in early stage; urethro-vesical irrigation later; autogenous vaccine, prostatic massage, medicine.
Rest.—Bad.
Supervision.—Perfect.
Diet.—Bad. Camp rations.
Results.—(*a*) In 10% of the cases of first attack epididymitis developed. (*b*) The average duration of the cases of first attack in which epididymitis did not develope, was 54 days. (*c*) The average duration of all cases of first attack was 68 days.

This was an exceedingly carefully worked out series, designed to cut down the percentage of epididymitis in Series III., which had been attributed to urethro-vesical irrigation being practised from the beginning of treatment.

Supervision was perfect, the anterior urethra being irrigated twice daily by a trustworthy, well-trained orderly and an injection of protargol administered once daily in the same way; so that all chances of treatment being neglected were eliminated. Urethro-vesical irrigation was carried out later. In addition each patient was given a full course of vaccine. The vaccine was specially made in each case and consisted of a freshly prepared autogenous vaccine (which was sometimes a mixed vaccine) *plus* a heterogenous vaccine recently prepared from a number of other patients.

Other treatment was carried out as mentioned in preceding series.

So much was expected from this greatly improved

treatment that it was thought the patients might be allowed to do guard duty and light fatigue work from the commencement of their isolation and this was carried out.

The results obtained showed no improvement over that of Series III., although the factor that was believed to be the cause of the 10% of epididymitis (early urethro-vesical irrigation) had been eliminated.

It was therefore clear that if improvement were to be obtained in results, rest must be insisted upon and urethro-vesical irrigation avoided in the early stages of the disease.

These cases were under the care of Dr. C. R. Merrillees, who prepared the vaccines and supervised the treatment in detail. They constituted the most carefully treated series dealt with at Langwarrin during the period covered by this paper.

SERIES V.

18 patients infected in Australia.
16 of the cases were of first attack.
12 are available for comparison as to duration.
Treatment.—Very good. Anterior urethral irrigation followed later by urethro-vesical irrigation. Full course of vaccine. Prostatic massage, hip baths and medicine.
Rest.—Very bad.
Supervision.—Very good.
Diet.—Bad. Ordinary rations.
Results.—(*a*) In 12½% of the cases of first attack epididymitis developed. (*b*) The average duration of the cases of first attack in which epididymitis did not develope, was 110 days. (*c*) The average duration of all cases was 124 days.

It was decided at this period to take advantage of the prolonged isolation to give the men some training, which took the form of light drill and fatigue work daily. An effort was made to counterbalance this disturbance of the rest element by an improved therapy.

A perfect system of supervision was arranged and anterior urethral irrigation was carried out in all cases, followed later by urethro-vesical irrigation. Each patient had a good course of vaccine and was given an appropriate light diet and hip baths twice daily. The medicine used in this and the following series was a simple diuretic containing potassium bicarbonate.

Reference to the results obtained shows little improvement on that of Series I., the patients of which received very little treatment until entering Langwarrin and then joined a camp very poorly equipped in every way. The unsatisfactory result can only be attributed to the want of rest.

SERIES VI.

39 patients infected in Australia.
30 of the cases were of first attack.
23 are available for comparison as to duration.
Treatment.—Very good. Anterior urethral irrigation followed later by urethro-vesical irrigation. Full course of vaccine to one third of the cases. Medicine.
Rest.—Very good for first two weeks and then very bad.
Supervision.—Very good.
Diet.—Good. Light.
Results.—(*a*) In 3% of the cases of first attack epididymitis developed. (*b*) The average duration of the cases of first attack in which epididymitis did not develope, was 58 days. (*c*) The average duration of all cases of first attack was 61 days.

Owing to the unsatisfactory result of Series V., these patients were given absolute rest during the early period of isolation. All the men were kept in bed in the ward for fourteen days after admission and treatment carried out as in Series V., with the exception that hip baths and prostatic massage were not given and only one-third of the patients were given vaccine.

The fall in the percentage of cases of epididymitis is very striking and must be attributed to the practice of anterior urethral irrigation and the opportunity for perfect rest during the early period of the disease.

This is the first series in which it has been possible to observe the effect of eliminating the two factors suspected of being concerned in producing epididymitis, *i.e.*, want of rest and the practice of urethro-vesical irrigation at an early stage. It was clear, therefore, that if results were to be improved further, the rest period must be extended.

GROUP C.

Guided by the results obtained in the foregoing, all the patients of the three series in this group were kept, during the purulent stage, under perfect conditions as to rest, *i.e.*, in bed in the wards, and were not given urethro-vesical irrigation during that period, which usually lasted about three weeks. The group demonstrates the possibility of eliminating epididymitis and the advantage of irrigation carefully given. The patients of Series VI. and VII. were not treated by the writer after the first four to six weeks; they were then transferred to medical officers experienced in treating the disease and the change would not be likely to affect the result in either way.

At this period a laboratory had been fitted up by Dr. Charles Johnson and vaccines, autogenous and other, were liberally provided.

SERIES VII.

14 patients were infected in Australia.
All of the cases were of first attack.
All are available for comparison as to duration.
Treatment.—Bad. Urethral ionization. Full course of vaccine. Hip baths and medicine.
Rest.—Perfect.
Supervision.—Perfect.
Diet.—Good. Light.
Results.—(*a*) In no case of first attack did epididymitis develope. (*b*) The average duration of the cases of first attack in which epididymitis did not develope, was 160 days. (*c*) The average duration of all cases of first attack was 160 days.

It was thought here that irrigation might be done away with; and urethral ionization was instituted. The anterior urethra only was ionized and it was hoped, as some of the cases came under treatment within from one to two days of signs of urethritis developing, that the disease might be prevented from spreading very far back. Unfortunately, the work could not be supervised personally beyond the first two or three weeks, when it was necessary to hand it over to an unqualified assistant; and after four to six weeks the treatment was discontinued.

During this early period of treatment, all other conditions, as rest, diet, hip baths, vaccine therapy and supervision were very good, probably perfect.

The value of this form of treatment cannot be judged by the result of this series, on account of the

unsatisfactory conditions under which it was carried out; but it is significant that, unsuccessful as it was from the point of view of duration of disease, no case of epididymitis developed. Should the ionization be regarded in this instance as of no curative value whatever, then the series would constitute strong evidence that the disease will not produce epididymitis if allowed to go its own way under good conditions as to rest.

SERIES VIII.

12 patients were infected in Australia.
8 of the cases were of first attack.
7 are available for comparison as to duration.
Treatment.—Fair. Injections, hip baths. Full course of vaccine. Medicine.
Rest.—Perfect.
Supervision.—Perfect.
Diet.—Good. Light.
Results.—(*a*) In no case of first attack did epididymitis develope. (*b*) The average duration of the cases of first attack in which epididymitis did not develope, was 81 days. (*c*) The average duration of all cases of first attack was 81 days.

This is another series in which there was resort to local treatment other than irrigation in the effort to avoid epididymitis. Patients were given four injections of argyrol daily. The injections were given immediately after the urethra had been flushed by urination, and alternate injections synchronized with hip baths and were held in the anterior urethra during the hip baths.

Conditions as to rest, diet, vaccine therapy and supervision were apparently perfect. Nothwithstanding the time taken to effect a cure, this must be regarded as one of the best series as regards the patients' welfare, on account of the elimination of epididymitis; but as regards the cost of treatment to the State, four of the series gave a lower average period in hospital.

SERIES IX.

10 patients were infected in Australia.
All the cases were of first attack.
All are available for comparison as to duration.
Treatment.—Very good. Anterior urethral irrigation, followed later by urethro-vesical irrigation. Injections. Full course of vaccine. Hip baths. Medicine.
Rest.—Perfect.
Supervision.—Perfect.
Diet.—Good. Light.
Results.—(*a*) In no case of first attack did epididymitis develope. (*b*) The average duration of the cases of first attack in which epididymitis did not develope, was 68 days. (*c*) The average duration of all cases of first attack was 68 days.

As the last two series did not promise to show the great improvement hoped for, it was decided to resume urethral irrigation and to combine it with urethral injection, which latter form of local treatment had shown no tendency to produce epididymitis in Series VIII.. Anterior irrigation was therefore carried out twice daily; immediately after each irrigation argyrol or protargol was injected into the anterior urethra and held there during the hip bath of half an hour's duration. The conditions as to rest, diet, vaccine-therapy and supervision were apparently perfect.

It was obvious that the treatment carried out in this series produced the best results. Whilst those cases in Series III., IV. and VI., in which epididymitis did not develope, were cured sooner by from ten to eighteen days, the patients stood a 3% to 10% chance of developing epididymitis, which would double the duration of the disease; that is, should it be decided to adopt the treatment of Series III., IV. or VI., in order to save from ten to eighteen days, a risk would be incurred, of from 3% to 10%, of having the disease prolonged by from 50 to 58 days, without taking into consideration the likelihood of permanent injury being caused by the epididymitis. On the other hand, if all cases be included, the average duration in Series III. and VI. is less than that of Series IX. by two and seven days respectively, but at the expense of a percentage of epididymitis.

Comment.

(*a*) *Results.*—The results obtained were much below what was expected and, from that point of view, disappointing; so much so that at a comparatively early period one was inclined to doubt whether treatment has any influence on the duration of the disease. It was no easy task to retain the confidence of these patients and keep them contented during a long course of treatment. Neither time nor trouble was spared, therefore, in the endeavour to shorten the period of isolation, but hopes of effecting rapid cures were far from being realized. Evidence is abundant that the response of the disease to the treatment was in proportion to the thoroughness of the treatment and to its supervision, other things being equal; but any approach to a dramatic result from any form of treatment, even in a comparative degree, was wanting.

Reports as to large numbers of cases being cured in brief periods could not be accepted as satisfactory unless some attempt had been made to classify them and fix a standard of cure.

The duration of disease in the above series has been obtained by considering that cure had been effected on the earliest date on which no signs of disease could be detected where the subsequent examinations confirmed the first observation.

Contrary to expectation, better results were not obtained in patients who came within a day or two of signs of the onset of the disease and with an early muco-purulent discharge than in patients admitted up to seven days after onset, with a well-developed purulent discharge.

There appears to have been confusion in reports as to the value of abortive treatment. Any treatment given before the onset of signs and in the absence of bacteriological examination would be prophylactic rather than abortive; no evidence could be deduced from it as to the possibility of aborting the disease once obvious infection had occurred. The shortest period required to effect a cure in any individual case dealt with in this paper was sixteen days; this occurred in Series III.. This patient was admitted with a purulent discharge and the incubation period was given as fourteen days; if the incubation period be taken as four days and ten days added to the period under treatment, the twenty-six days resulting is most unusually short for any individual case and far below average in any series.

(*b*) *Infectivity.*—The series provide no evidence as to the prolonged infectivity of the disease after

apparent cure. Organisms were never found on microscopical examination of the prostatic fluid after all signs of disease had disappeared; nor was growth obtained in the few cases in which culture methods were employed.

It is clear how easy it would be under less advantageous conditions as to examination to consider patients as cured long before all signs of disease had disappeared.

(*c*) *Irrigating Fluid.*—It was not noted that any antiseptic used in irrigating exerted any specific action; but there was evidence that, in the early stages, weak permanganate was superior to saline or boracic lotion or sanitas.

(*d*) *Prostatic Massage.*—All the patients with second attacks coming under observation soon after infection were found to have large, firm prostates, obviously not due to the second infection; this condition was independent of age and clearly the result of the first attack. In early cases of first attack the prostate was small and soft and rarely became enlarged to any appreciable extent later; its size on discharge from hospital was not influenced by massage having been carried out. It was thought that massage during the disease might prevent the occurrence of subsequent enlargement, which had been noted as a pre-existing condition in early cases of second attack; for that reason, massage was continued through the first five series. There was no evidence that it had any favourable influence on the disease, although it would be difficult to prove its want of value, as it was not possible always to provide controls. It is not clear why expression of the prostate at comparatively long intervals should influence the course of the disease or protect the gland itself from infection. Abscess of the prostate in this disease is apparently a very rare complication. At one period out of some thousands of cases, one only had occurred, and it is a question whether it was not the result of unskilful massage rather than of the urethritis. But abscess of the prostate must not be confused with abscess of the perineum; a number of these cases occurred and were due to want of care on the part of the orderlies assisting in this treatment, since, if attention be not paid to cleanliness of the lubricant and gloves, particles of dirt and grit will be rubbed into the mucous membrane of the anal canal and result in inflammatory processes in the ischio-rectal fossa, which may be palpated as tender swellings *per rectum* or seen beneath the skin of the perineum. The smaller ones will sometimes disappear, but usually they break down and discharge into the rectum, or a *fistula in ano* follows their incision or spontaneous opening through the skin of the perineum.

(*e*) *Vaccine Therapy.*—These series provide no evidence as to the usefulness of vaccine. In Series IV. and V. it is shown to be unable to compensate for want of rest; in Series VI. one-third of the cases were given a good course of vaccine, but showed no better results than those without vaccine, which were otherwise similarly treated. Apart from epididymitis, complications were very rare and not more frequent in cases not treated by vaccine.

(*f*) *Medicines.*—Apart from their diuretic action, they were not shown as having any influence on the disease.

(*g*) *Diet.*—No improvement was noted that could be attributed solely to a change to more suitable diet.

(*h*) *Standard of Cure.*—It was the desire of the authorities that the highest possible standard of cure should be insisted on. On that account medical officers were given a very free hand in holding patients until they appeared to be quite free from disease. The standard was probably higher than that obtained in isolation camps elsewhere in Australia, or abroad.

(*i*) *Control.*—It was not possible to control every element of the treatment; but those conclusions that are not based on proofs are very strongly suggested. Consideration of the above series, however, will furnish proofs in most cases.

(*j*) *Recurrence.*—No case of recurrence in these series of first attack reached Langwarrin. The records of No. 5 Australian General Hospital, through which all the patients from training camps passed, show that one such case reported there with a muco-purulent discharge containing no organisms on repeated examinations. It is probable that other such cases occurred, but there must have been very few, as at this period men were subjected to a very critical examination on rejoining camps, where, in many cases, a search was made for urinary shreds and, if these alone were found, the patient was returned to isolation.

Experience of these series of cases suggests that recurrence is likely to follow cessation of treatment when shreds in the urine constitute the only evidence of disease; that a recurrence appearing at such a stage will not assume a purulent character; and that in men discharged after having reached the standard of cure referred to in this paper, any recurrence would be mucoid in character and not infective.

It may be noted here that a small series of the cases of first attack has recently been examined after return from abroad from 2½ to 3 years after discharge as cured. In most of them no evidence of disease could be detected; but in two cases the prostate was slightly enlarged and firmer than normal and a few shreds were present in the early morning specimen of urine, but none in a later specimen after massage of the prostate. Both these specimens yielded no organisms, pus cells, or other cell elements after centrifuging. They had both been given regular prostatic massage during their treatment and the prostates had been of normal size throughout.

(*k*) *Possibility of Further Improvement in Treatment.*—It is thought that a more discriminating use of injections in Series VIII. and IX. would be advantageous, such as variations in frequency in Series VIII. and occasional interruptions in their use in Series IX., as it appeared that ill-regulated local treatment prolonged the purulent stage. If irrigations were always given by trained orderlies, as at Milson's Island, their correct administration would be ensured, the effects of neglect and carelessness eliminated and, no doubt, other things being equal, the duration of the disease correspondingly shortened.

Conclusions.

1. Suitable treatment has a favourable effect on the disease.

2. Want of rest and improper treatment, such as early urethro-vesical irrigation, will cause epididymitis to develope.

3. Diet and medicine are of secondary importance.

4. Prostatic massage and vaccine are not useful.

5. A good system of outdoor treatment will not produce the best results unless facilities for rest are available.

The difficulty of procuring reliable statistics is well illustrated by this article. Of some 600 men dealt with, the records of 365 only are sufficiently complete to justify their inclusion. Of these, 82 received their early treatment outside Australia and 26 were treated by other medical officers during the last two or three weeks of their isolation, whilst the patients of Series IV. were under Dr. C. R. Merrillees, but the writer was so familiar with the details of their treatment and their records were so carefully kept and complete, that the liberty is taken of including them. Of these 365 patients, only 309 cases of first attack are available for comparison as to epididymitis and 147 as to duration. Although some of the later series are smaller in numbers compared with earlier series, the disadvantage of that is more apparent than real, as they provide a greater percentage suitable for comparison, *e.g.*, Series VII., VIII. and IX., totalling 36 cases, provide 31 cases for comparison as to duration, while Series III., of 90 cases, provides only 20 cases for such comparison.

Reports of Cases.

THREE CASES OF OPHTHALMOPLEGIA.[1]

By **Robert Pulleine, M.B. (Syd.),**
Adelaide.

Quite recently three cases of ocular muscle paralysis came under my notice simultaneously, due to widely different causes. As all these are worth recording in our literature, I venture to bring them before you to-night.

The first is of traumatic origin, the second due to acute disease, the third to chronic disease.

CASE I.—Private J., *æt.* 27, wounded in France on July 8, 1917. The external wound is midway between the left outer canthus and the left external auditory meatus. The fragment which penetrated the skull, is small and can be seen in the plate at the level of the orbital fissure. All the nerves entering the entering the orbital hilum are affected. The second nerve shows atrophy apparently advanced, but the vision is still $^{6}/_{24}$ and the field normally full tested by large object (5 mm. sq.) perimetry. The muscles supplied by the third nerve show marked weakness and their power of movement is almost nil. There is paralytic external deviation. Added to this there is partial ptosis marked in the morning, getting less during the day and worse again when he gets tired. The fourth nerve fails to innervate the superior oblique perceptibly. The ophthalmic branch of the fifth, although not badly enough injured to interfere with the nutrition of the eye, indicates that it has not escaped by the partial anæsthesia and numbness of the forehead of the affected side.

The sixth nerve, finally, has not full power to abduct the globe, in spite of the weakness of its antagonist, so that the eye cannot be turned right out to the limit.

The left pupil is fixed, moderately dilated and shows no reaction to light or accommodation and there is diplopia in every direction.

Looking at the anatomy, it is obvious that the projectile is amongst the nerves at their entrance to the fissure, and in this connexion it is interesting to note that a similar case is pictured and described in Lagrange's "Fractures of the Orbit" (Military Manuals).

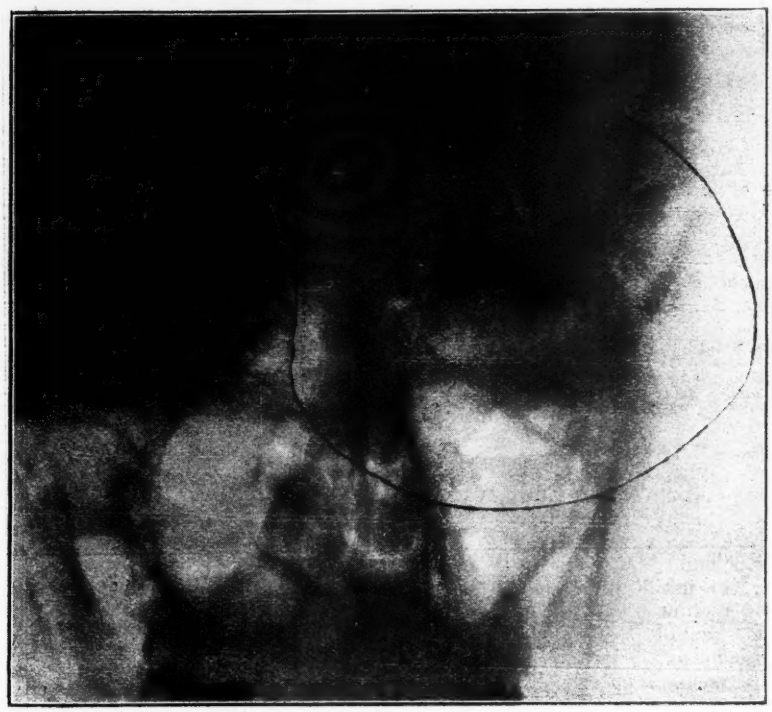

FIGURE I.
Case I.—Front View.

In the case cited there was total destruction of function of all nervous structures entering at the hilum, total blindness on the affected side and a fixed, immovable eye.

CASE II.—Mr. P., *æt.* 28, states that on May 8, 1919, he suffered from a slight cold, which left him rather suddenly after three or four days. On May 14 he noticed that his scalp was tender when lightly touched or combed. Every few minutes he felt a stab of pain in his left ear. This pain ceased after a day or two and was succeed by pain behind the left ear. This again was followed on May 23 by drumming noises at intervals in the right ear. On the night of May 22 he developed a headache and was exhausted by the walk home, felt feverish and weak next morning and the next. On May 24 he had to take to bed, having a

[1] Read at a Meeting of the South Australian Branch of the British Medical Association on July 31, 1919.

poor appetite, feeling drowsy and weak and needing a lot of sleep. On the night of May 26 he began to be troubled with diplopia. Before the end of May the left side of the face became paralysed. He now finds that the right eye cannot turn to the left or look downwards as well as the left eye.

On examination there is diplopia in all directions, the right eye shows paralytic external deviation to the right; there is limitation of vertical movement.

There is no ptosis; vision is $^{6}/_{6}$ in each eye; the pupillary reactions are normal; the fundi are normal.

At the present date, end of July, the facial paralysis has much improved, but the eye condition is unaltered. He is able to work with one eye covered and there is no noticeable local or general asthenia. Apart from the weakness of the facial muscles, there are no sensory or trophic changes in the face or eye. In this case there was a long prodromal stage, a febrile stage and a simultaneous affection of three nerves, whose nuclei are close neighbours in the pons. I suggest that this was an example of acute bulbar polio-encephalitis.

As a postscript one might add that a fortnight before he was taken ill his wife had an attack which included all the prodromal symptoms passing off with severe pains in the top of the head, but no paralysis or paresis.

CASE III.—This concerns a man of 42 of clean social history. His father was tabetic.

He noticed as far back as September, 1915, that the right lid showed a tendency to drop when he was tired and that the pupils were unequal. The ptosis disappeared until 1917, when it recurred in August after strenuous work. This time the lid righted itself in two months.

In September, 1918, heavy work again brought on ptosis of short duration, but in June, 1919, while playing billiards, he felt his eye go misty and found he had diplopia. As he is a total abstainer, the diplopia led him to seek advice. He had been rifle shooting up to a week before the onset and the crossed and vertically displaced images troubled him greatly.

On examination there is diplopia in all directions, except one which he has already learned to assume when writing. There is paralytic external deviation of the right eye and partial ptosis. Vision is normal in both eyes; the fundi and fields are normal. The pupil shows no consensual or light reaction, but reacts to accommodation. There is thus both *ophthalmoplegia externa* and *interna* and the condition after some weeks has not altered for the better. From its suddenness it was probably a small pontine or nuclear hæmorrhage. Can anyone state a prognosis?

These cases, then, exhibit the same symptom arising under very diverse conditions, and as such I hope they are worthy of being recorded.

FIGURE II.
Case I.—Side View.

Reviews.

SPELLING AND PRONUNCIATION.

Endeavours to convey by the use of plain and accented letters and special signs the correct pronunciation of words are apt to be grotesque. Moreover, it is extremely difficult to attain uniformity in the standards on which a pronouncing dictionary can be built up. Dr. Frank H. Vizetelly has attempted this task and he has achieved at least as much success as have any of his predecessors.[1] In an explanatory introduction he indicates to the user of his book the methods which must be employed. He has overcome the chief difficulty in giving signs for the many and varied impure vowel sounds which enter so largely into the English language. Added interest is gained by the brief historical sketch of the correct pronunciation and spelling of words and of the introduction of "less correct" or incorrect innovations. In each case the reference discloses the authority. This book may be used with advantage by persons who habitually hear the English language mispronounced and read it misspelt. It will be found a useful book of reference for those whose knowledge of English is sound, but who wish to adopt a correct form of speech when employing unusual words. The pronunciation of many foreign words is also included.

[1] A Desk-Book of Twenty-five Thousand Words Frequently Mispronounced, by Frank H. Vizetelly, Litt.D., LL.D., 1917; New York and London: Funk & Wagnalls Company; Sydney: Angus & Robertson Limited. Pocket size, pp. 906. Price, 8s. 6d.

The Medical Journal of Australia.

SATURDAY, SEPTEMBER 13, 1919.

The Control of Higher Education.

There have been many attempts made in the past to secure representation of special interests on the governing bodies of our universities. In the majority of instances these attempts have failed, not because the interests concerned were of small importance, but because the functions of the controlling body cannot be divided and consequently each member must be prepared to devote his energies to higher education generally and not to one branch of education. Those who oppose the attempts to introduce sectional interests on this body, have disclosed a tendency to go to the other extreme and to advocate the election of members who have no special knowledge of the working of the several faculties and of the requirements of the several professions recruited from among the students of these faculties. It has even become common for a semi-official "ticket" to be formed. The members voting are asked to delegate their powers of selection and discrimination to the originators of the "ticket" and to vote blindly as they are told. This system should be opposed under all conditions, but especially when it concerns an intelligent and intellectual electorate. In the case of a university election, the "ticket" usually means that the members chosen have a good grasp of continued school education, but have little conception of the special needs of the individual schools within the university. Voting by dictation is so undemocratic a procedure, that it is surprising that it has survived for a day in Australia.

In considering the qualifications for a useful member of a governing body of a university, it is necessary to take account of the objects of the university. Primarily it is an institution for the professional equipment of young men and women who have passed through their school courses and seek more advanced training in the various branches of learning. It is something better than a technical college, where practical preparation for a calling is given to the pupils. In the faculty of arts the subjects taught are identical with those taught at school, but the manner of the teaching is, or should be, different. A graduate in arts is, or should be, a person with a claim to the distinction of being well educated. Not only is information imparted, but a taste for the better class of literature, a facility and inclination to comprehend and use mathematics and a critical understanding of the habits, customs, development and distribution of peoples and races are stimulated. In all other faculties the subjects taught are new to the student, or if they were contained in the school syllabus, they are taught in the universities as advanced and not as elementary sciences. The members of the governing body have the task of acting as controlling boards to the faculties. They have to deal with the debated and debatable questions of the allocation of money to the many departments of the universities, the determination of the establishment of new chairs, the coordination of the faculties and a thousand and one other questions. It is readily seen that the useful member of this body is the man who has a large grasp of education in the abstract and special knowledge of the educational systems applied in the world's universities in connexion with medical, legal, engineering, scientific and pædogogic training. If these subjects were regarded as special interests, there should then be a scheme for building up an executive with representatives of the professions involved in proportion to the number of students. Such a body would be unwieldly and would not make for progress in education. On the other hand, it is quite essential that the members should have expert knowledge of the systems of education employed, of the internal working of the departments and of the defects that need remedying.

At the forthcoming election of ten members of the Senate of the University of Sydney, the electors should accept their responsibilities and refuse to be misled by any "ticket." The medical members of the University are taking steps to place the names of candidates of their selection before the electors. We have no doubt but that these candidates will be chosen for their knowledge, interest in higher education and broad mental outlook. Each of these candidates will carry an additional qualification of having special knowledge of the requirements of medical education,

while it is not improbable that their purview will include a good insight into the details of the teaching of pure science and of applied sciences. The electors will, we feel confident, examine the qualifications of each candidate whose name appears on the list and will record a preference for those who are known to them as men competent to serve the University faithfully and to its advantage.

BLOOD VOLUME IN SHOCK.

A considerable amount of literature has accumulated during the past few years on the subject of traumatic or wound shock. The occurrence of this condition has long exercised the minds of surgeons in civil practice; the war determined the subject to be one of urgent importance. There are certain difficulties in the way of a solution of the problem concerning the elucidation of the causes, nature and physiological effects of traumatic shock. In the first place the phenomena associated with shock and primary hæmorrhage are not necessarily the essentials of the condition. Investigators are in danger of being led astray by side effects in their search for the chain of events resulting from the trauma. As long ago as 1870, Goltz demonstrated on the frog that a sudden blow on the exposed mesentery led to an arrest of the heart's action through vagal stimulation. He showed that as the arteries dilated in response to the stimulation of the vagus, the blood tended to accumulate in the splanchnic vessels. This condition of bleeding into the splanchnic area without doubt takes place both in traumatic shock and in the condition known as fainting. The response to the trauma is too regular and too prompt to be anything else than the actual condition itself. So far there can be no hesitation or doubt. But it has gradually been forced on surgeons that this clinical picture represents but a part of the phenomenon under investigation. The immediate effects of the trauma are spoken of as primary shock. This part of the problem is of relatively small importance, inasmuch as the onset is rapid and the condition evanescent. If it passes off, the subject returns to his normal condition. There is, however, a secondary condition of shock of a more important kind. It is to this late manifestation that the attention of laboratory workers and surgeons has been directed during the period of the war. Crile held strongly after careful and prolonged study of the phenomenon that in this secondary shock the vasomotor centres became fatigued as a result of overstimulation of the sensory nerves. It was ascertained that the amount of blood passing through the heart was diminished. Crile showed that the cardiac muscle was not at fault. He attributed the small return of blood to the heart to a gradual failure of arterial tone and a consequent decline of arterial pressure. His conception of the condition included an assumption of an accumulation of blood in the great veins. Physiologists, however, have demonstrated two striking facts. The first is that a lowering of arterial pressure resulting from the relaxation of the arterial walls, does not lead to an accumulation of blood in the great systemic veins. The second is that the arteries contract in secondary shock. The second fact was first demonstrated by Malcolm. Further research has revealed that while the arteries are in a state of contraction and not one of relaxation, as assumed by Crile, the blood pressure is actually lower. The only explanation possible for this seeming paradox is that the volume of blood has become diminished in some manner which is not immediately obvious. It is held by Cannon and many others that the diminution of the circulating blood is the result of a stasis, with an accumulation in the capillaries. Other physiologists have demonstrated that there is a concentration of the particular elements, the corpuscles, which implies an exodus of plasma from the vascular system into the tissues. A special committee has been appointed by the Medical Research Committee to investigate this matter and during the past year the members of that committee have contributed important information to our stock of knowledge. Some of the conclusions arrived at, such as the assumption that chemical substances analogous to histamine are responsible for the physiological changes inseparably associated with secondary shock, will have to be confirmed more definitely than has been the case up to the present, before they will receive general acceptance. The mechanism of the so-called exæmia, however, has been minutely worked out and when the causes that lead to the passage of plasma through the walls of the blood vessels have been determined, the nature of shock will be under-

stood. N. M. Keith has produced irrefutable evidence of the fact that the volume of blood and the volume of plasma are diminished in secondary shock. He has further demonstrated that when the severity of the shock reached a certain level, the vessels lose the power to retain within them an amount of blood sufficient to support life. The infusion of fluid of the same osmotic tension of blood leads in the mild and moderately severe forms of shock to a restoration of the normal mechanism by which the blood volume is maintained. It can be demonstrated that when recovery from shock occurs without intravenous infusion of fluid, the fluid in the tissues again passes into the vessels and the normal volume of blood is restored. On the other hand when the shock is excessive, not even a pouring into the vessels of a suitable fluid is capable of removing the increased permeability of the vascular wall. The fluid passes into the tissues without hindrance. It is clear that this disturbance of the mechanism to maintain the volume of the blood is an effect and not the cause of the symptoms of secondary shock. Consequently the treatment by transfusion of blood or by the infusion of gum solution, while of undoubted value in severe cases, fails in extreme cases, because it covers the results and thus temporarizes until the body can remove the cause. The histamine theory, if a fact, would offer part of the solution of the problem still in doubt. It would also open the door to a rational therapy. But even if it could be shown that histamine or some analogous substance were present in secondary shock and were responsible for the altered condition of the vascular wall, we would still need an explanation of how trauma leads to its appearance.

FLEXION REFLEX IN MAN.

The doctrine of defence reflex has been built up on the observed phenomena of flexion response to stimulation in the lower animals. Sherrington has found that a stimulus applied to the skin, muscles, tendons and joints results in a contraction of flexor muscles and a reciprocal relaxation of the extensors. The receptive field embraces all parts of the body provided with the necessary sense end-organs. The phenomenon, as observed in vertebrate animals in the laboratory, represents not a single reflex, but combination of innumerable flexion reflexes evoked by the stimulation of innumerable sensory end-organs. The immediate reaction consists in contraction of the flexors and the relaxation of the extensors. The after reaction may take the form of an extensor rebound, or it may manifest itself as an increment of flexion, or, lastly, it may assume the nature of alternated flexions and extensions. A weak stimulus may give rise to extension in the same limb and of flexion of the opposite limb. When both limbs are stimulated at the same time, the reactions in either limb are an algebraic summation of the reactions which occur when either limb is stimulated separately. It has further been noted that all parts of the receptive field are not equally excitable. Moreover, in a mammalian animal, movements of the toes do not occur with the same regularity in the reflex as movements of other joints. A peculiar form of rigidity obtains in connexion with the toes and fingers and has been called reflex standing by Sherrington.

The phenomena of flexion reflex have not been studied with the same thoroughness in man as they have in animals. The reason for this is the difficulty of obtaining suitable environment for observation. Captain T. Graham Brown and Captain R. M. Stewart have endeavoured to carry the teaching of Sherrington further and to apply it to the human subject.[1] They have arrived at the conclusion that under normal conditions the only portion of the receptive field that can be stimulated with effect is the area containing sensory nerve endings in connexion with the foot and possibly the leg. By pressing the *tendo Achilles* against the posterior surface of the tibia the great toe flexes at the interphalangeal joint. At times flexion is obtained by pressure applied to the *vastus externus*, the *vastus internus* and the *gastrocnemius-soleus* muscles. On the other hand, when the cord has been injured the receptive field for effective stimulation corresponds more closely to that of the lower animals. The authors give examples substantiating this claim. They point out that the response in the great toe is usually extensor, but in the case of a person affected with syringomyelia superficial stimuli applied to the sole of the foot gave rise to a flexion of the great toe, while stimuli applied to the *gastrocnemius* or to the postero-internal border of the tibia resulted in extension. While the flexion reflex in a normal man is very limited, in a subject suffering from a spinal lesion all or nearly all the muscles of the limb are involved. In distinguishing between the flexion and extensor relaxation it is necessary to recognize that the contraction takes place in the physiological flexors. The immediate reflex phenomena usually take the form of flexion at the hip, knee and ankle, extension of the great toe and abduction of the toes. At times the anterior abdominal muscles contract, leading to a flexion of the lumbar spine. At the same time there is crossed extension in the opposite limb. Rarely there may be crossed flexion. The movements of the two limbs are noted to be accurately reciprocal. At times no movements occur in the stimulated limb, while there is flexion after a prolonged period of latency in the other. They have observed in the case of complete division of the cord a reflex reversal. This took the form of extension in the stimulated limb and flexion in the opposite limb. Successive reflex phenomena of a distinct type were observed. They speak of this reaction as the rebound reflex.

[1] *Journal of the Royal Army Medical Corps*, Vol. XXXII., No. 6, June, 1919.

Similarly, the rhythmic phenomena which have been described in connexion with the lower mammals, have been observed in man after division of the cord. The authors claim that many of the reflexes described by them have not before been noted in man, but they suggest that this is due, not to their infrequent occurrence, but to the fact that they have not been sought. They suggest that some of them may be of diagnostic significance. For example, they point out that the rhythmic alternate movements of the lower limbs in response to stimuli applied to one or both lower limbs are in fact forms of the reflex involved in progression. When they occur, it is usually possible to determine the level of the lesion. But, apart from this possible significance, the observations are of importance, demonstrating, as they do, the fact that the flexion reflex in man is comparable to that of the lower mammals.

MOSQUITO CONTROL.

Theoretically malaria can be stamped out in any given district, provided that a well-planned attack is made on the mosquito breeding places and that persons suffering from the disease are guarded from mosquitoes until their blood no longer contains the plasmodium. In practice, however, the economic side of the question has to be considered and a counsel of perfection is rarely obtainable. The problem resolves itself into an estimate of methods which may lead to the ultimate eradication of the disease without disturbing the industrial value of the district in which the campaign is carried out. An instructive lesson concerning practical methods of eradicating malaria is delivered by Drs. J. C. Geiger and W. C. Purdy, of the United States Public Health Service, who have carried out extensive experimental observations in the ricefield districts of Arkansas.[1] These studies have been supplemented by continued observations conducted by the two investigators and a sanitary engineer, Mr. R. E. Tarbett, in the course of which the results of the campaign are indicated.[2] The special difficulty arising in ricefield districts depends on the fact that the fields have to be flooded during the period of growth. In other words, rice cultivation precludes the removal of the breeding places of mosquitoes. The methods applicable to the fields were consequently limited to the use of kerosene, the introduction of minnows into the water collections or the employment of intermittent flooding. It was essential that the method selected should not be so costly that the industry would become unprofitable, nor could a method be accepted that would lead to the deterioration of the rice plants. It was found that "fuel oil" and "oil mixture" delivered from a drip can failed to spread satisfactorily and the larvicidal action was limited to the immediate neighbourhood of the drip. Moreover, where efficient action on larvæ was obtained, the oil discoloured the stalks of the rice and either killed the plants or damaged them considerably. Better results were obtained when the oil or kerosene was soaked up in sawdust before being distributed. The reduction on one application represented approximately 85% of the larvæ. After four days the count of larvæ revealed 74% of the original number. A second application apparently cleared the larvæ out altogether. Top minnows (*Gambusia*) yielded varying results, but the authors formed the opinion that for deeper water, they acted well. The minnows appeared to avoid the shallow waters in the middle of the fields. This fact reduces their value as means for attacking the problem. Lastly, it was found that intermittent flooding not only failed to clear the larvæ out, but was prohibitive as far as cost was concerned.

While these measures were being applied in the ricefields a special campaign was instituted among the inhabitants in the neighbouring district. The control consisted in a careful examination of the blood of every person resident in the district. There were approximately 1,500 persons. The incidence of malaria was estimated at 29%. It was discovered that 90 persons were plasmodium carriers. Each of these carriers was treated with 0.6 grm. doses of quinine in capsules, taken once a day at bed-time. The treatment was continued for thirty days and a second course was started immediately. In the next place adequate screening of the dwellings was undertaken and controlled. Ditches and surface drains were remade and steps taken to prevent the accumulation of stagnant water in which mosquitoes could breed. An investigation undertaken with considerable ingenuity revealed that the flight of mosquitoes reached one mile. It has been determined elsewhere that a mosquito has flown as far as 1.7 miles, but this apparently is exceptional. It was therefore assumed that the area of control should be extended for at least one mile from the dwellings. This was carried out. The result was most striking. Not a single case of malaria occurred during the following season. The authors emphasize the importance of seeking for plasmodium carriers, who, notwithstanding the absence of all signs of disease, are capable of infecting mosquitoes and thus keeping the disease active in the district.

[1] Experimental Mosquito Control in Ricefields, *Journal of the American Medical Association*, March 15, 1919.

[2] Effective Malaria Control in a Ricefield District, *Journal of the American Medical Association*, March 22, 1919.

THE TRANSMISSION OF EPIDEMIC CEREBRO-SPINAL FEVER.

Epidemiologists have held for some time that cerebro-spinal meningitis is produced by infection of the upper respiratory passages. The path that the meningococcus travels from the naso-pharynx to the membranes of the brain has not yet been ascertained. Some believe that the invasion passes along the lymphatics around the olfactory nerves, while others think that such evidence as is available points to hæmatogenous infection. Flexner observed leucocytes containing Gram-negative cocci, in the throats of monkeys which had received an intra-spinal injection of meningococci, but he was not able to cultivate meningococci from the mucus of the throat. Considerable amounts of cultures of meningococci must be injected into the sub-arachnoid space in monkeys to incite a fatal meningitis. Injections of even large quantities of meningococci into the blood stream are quite ineffective.

The appearance of the disease among the armies of the Western front and among recruits in different parts of the world has led to many studies designed to elucidate this problem. These investigations have made it evident that the meningococcus is more frequently present in the blood than was formerly supposed, that hæmatogenous infection may exist for some days without any demonstrable infection or inflammation of the meninges and that general systemic infection with the meningococcus without meningeal involvement is not uncommon. It has been noted by Herrick and others among recruits that the diplococci may be found in the blood but not in the cerebro-spinal fluid and that signs and symptoms of meningeal irritation may be present without any cellular or other changes in the cerebro-spinal fluid. Some physicians state that these persons develope meningitis if they are not treated by intra-spinal injections of specific serum. Other physicians, however, raise the question of the possibility of the intra-spinal injections promoting the infection of the meninges. It is well known that poliomyelitis is rarely produced by the injection of the virus into the blood, but that infection readily occurs when the meninges are injured after hæmatogenous injections of the virus. When immune serum is introduced by lumbar puncture into an animal which has received an intravenous injection of the virus of poliomyelitis, an aseptic meningitis results, but no infection with poliomyelitis is brought about.

An investigation[1] has been carried out at the Rockefeller Institute for Medical Research, New York, by Harold I. Amoss and F. Eberson upon the infectivity of hæmatogenous injections of meningococci into monkeys and rabbits. The meningococci have belonged to different strains and their virulence has been increased by passing them twice or thrice through monkeys or rabbits. In the case of monkeys it has not been possible to produce meningeal infection by injecting serum, saline solution or protargol into the subarachnoid space. In some monkeys the meningococci have been kept circulating in the blood for 72 hours by repeating the hæmatogenous injection. In rabbits a similar result has been obtained, but infection of the meninges could be produced by injuring the cord with the needle during the injection. These interesting observations stand in contrast to those obtained with the virus of poliomyelitis and reveal a difference in the infectivity between the two viruses. In this connexion it should be remembered that monkeys are readily infected through minute quantities of the virus of poliomyelitis, but do not become ill unless considerable amounts of meningococci are introduced.

From these experiments it would appear to be safe to use intraspinal injections of serum in the treatment of early cases of meningococcal infection, especially as the results of clinical experience appear in many instances to be favourable.

ALCOHOL IN THE BLOOD.

It has been known for some years that the absorption of alcohol from the alimentary tract in the human subject is practically complete when quantities and concentrations are employed such as are usual with alcoholic beverages. It has also been ascertained that the greater part of the absorbed alcohol undergoes oxidation within the body. A small proportion, usually less than one tenth, escapes as vapour in the expired breath. Some further facts[1] of much importance in tracing the fate of alcohol within the animal organism have been contributed by Dr. Edward Mellanby in a report on the amount of alcohol in the blood under different circumstances furnished to the Medical Research Committee of National Health Insurance. The object of the investigation has been to discover how far the circumstances under which a quantity of alcohol has been consumed, could affect the degree of intoxication induced by it.

The experiments have been carried out upon four dogs, varying in weight from 10 kilos. to 13.5 kilos.. They have received large amounts of alcohol, ranging from 20 c.cm. to 55 c.cm.. The results have been confirmed by a few observations upon man. After the administration of an amount of alcohol varying from 30 c.cm. to 55 c.cm., alcohol rapidly appears in the blood. The amount increases rapidly for about one and a half hours, when the maximum concentration is reached. This has been about 0.5 c.cm. for each 100 gm. blood. The concentration in the blood of each of the four dogs has been strictly proportional to the amount of alcohol administered. When the quantity of alcohol has been less than 20 c.cm. the concentration of alcohol in the blood has been less than would be expected from that found after the administration of the larger quantities. In these experiments the animal has been fed with meat at 2 p.m. on the day previous to the estimation. The alcohol remains in the blood for about twenty hours, the concentration falling at a rate directly proportional to the time that has elapsed since the maximal concentration was reached. When the dose of alcohol has been given in three portions instead of one dose, the maximal concentration and the rate of accumulation in the blood have been the same as when one dose has been given, if the whole dose has been administered within two hours; but the maximal concentration in the blood has been less and the rate of accumulation lower, if the dose has been given over a period of more than three hours. When the alcohol is diluted it has been found that absorption is slower and that the maximal concentration in the blood has been decreased.

A most interesting series of experiments have been performed to discover the effect of food in the stomach in modifying the concentration in the blood. The presence of food delays the absorption of alcohol and lessens the maximal concentration in the blood. The effect is small in the case of meat and cheese. It is greater with suet and other fats. Milk is, however, the most potent agent in lessening the absorption of alcohol. Its effect appears to be the same whether it is given with the alcohol or two hours previous to the alcohol.

[1] *Journ. Exper. Medicine*, Vol. XXIX., p. 605, June, 1919.

[1] Alcohol: Its Absorption into and Disappearance from the Blood under Different Conditions, by E. Mellanby, M.A., M.D. (Cantab.); Special Report Series, Medical Research Committee, National Health Insurance, 1919, London.

Abstracts from Current Medical Literature.

MEDICINE.

(91) Early Tuberculosis and Hyperthyroidism.

N. C. Nicholson and Emil Goetsch indicate the difficulties in the diagnosis of tuberculosis in its earliest stages (*Canadian Med. Assoc. Journ.*, June, 1919). A large group of patients display the syndrome of fatigue, asthenia, loss of strength, loss of weight, nervousness, tachycardia, vasomotor instability and possibly slight elevation of temperature. This syndrome leads to the suspicion of tuberculosis. The physical signs, laboratory and X-ray findings in these cases, however, are insufficient for a positive diagnosis. Such patients may be subjected to a rigid anti-tuberculosis therapy extending over years, but their symptoms remain unimproved. Another group of patients have definitely demonstrable tuberculous lesions, which, however, after a sufficient length of treatment, may or may not show retrogression; the rapid pulse, fatigue and, possibly, slight elevation of temperature remain. Are the symptoms referable to the tuberculous lesion, or are they due to an entirely different cause? The authors believe that in some cases the symptoms are due to hyperthyroidism. They believe that they have a clinical test which reveals the presence of hyperthyroidism. This test depends on the use of adrenalin to elicit a state of hypersensitiveness of the sympathetic nervous system, such as is present in conditions of hyperthyroidism. In order to be as calm and restful as possible, the patient is put to bed on the previous day and is assured that the test will not be painful or dangerous. On the day of the test the patient is placed as nearly as possible under normal conditions, that is, in a warm room without the appliances, such as hot-water bottles, heating devices, etc., which are common in the outdoor treatment of tuberculosis. The patient takes his meals in bed. The test is not given at the menstrual period. Two readings of the blood pressure, pulse and respiration are taken at five-minute intervals. The condition of the patient is noted as to subjective nervous manifestations, throbbing, heat and cold sensations, pallor, flushing, size of pupils, tremor, throbbing of neck vessels, etc.. A subcutaneous injection of 0.5 c.cm. of commercial (1‰) solution of adrenalin chloride is made into the deltoid region. At the end of 1½ hours, or earlier, the reaction has passed off. In a positive reaction there is usually an early rise of blood pressure and pulse-rate of over ten points at least. There may be a rise of 50 points or more. In 30 to 35 minutes there is a moderate fall, then a slight secondary rise and finally a fall to normal in about 1½ hours. The clinical picture of hyperthyroidism is exaggerated, especially the nervous manifestations. The symptoms of which the patient complains are increased and, in addition, latent symptoms are brought out, *e.g.*, extra-systoles. Vasomotor changes may be present, *viz.*, early pallor of the face, lips and fingers, due to vaso-constriction, followed by vaso-dilatation, with flushing and sweating. Hyperthyroidism, whether or not associated with tuberculosis, will give a positive reaction to adrenalin. Tuberculosis, uncomplicated by hyperthyroidism, does not react positively to adrenalin.

(92) Acute Nephritis.

A. V. Veer and J. H. Saunders have studied 45 cases of nephritis occurring in a base hospital in France during the winter of 1918-1919 (*Journ. Amer. Med. Assoc.*, May 31, 1919). Eleven patients gave a history of probable kidney disease in their immediate families. No particular effort was made to determine the history as regards alcohol and tobacco. In a general way the patients drank very little and smoked a great deal. Sixteen gave a history of tonsillitis; but tonsillitis is a common disease. Twelve gave a history of having previously had enteric fever. Investigation showed that there is a possibility that excessive consumption of salt and meat have an ætiological bearing on the development of the disease. Diarrhœa as an ætiological factor was of doubtful importance. The authors were compelled to fall back on the hypothesis that the attack was due to exposure to dampness and cold, insufficient nourishment and excessive physical and mental strain. The earliest symptoms were nocturia and dyspnœa. Headache was rare. In some the first thing noticed was œdema of the face or feet. Two of the patients had convulsions; in both the symptoms cleared up entirely. Eye examination revealed the fundus normal in 40, with slight changes in two. In no case were hæmorrhages present. As regards blood pressure, of 44 patients nine had a systolic pressure above 160 mm. at first and 13 had a diastolic pressure above 90 mm.. A high diastolic pressure was of serious import. In one case in which the patient was bled, the blood pressure fell from 200 mm. systolic and 120 mm. diastolic to 150 mm. systolic and 110 mm. diastolic with marked improvement in the patient's condition. In every case the blood pressure fell to normal after rest in bed and restriction in diet. Phenolsulphonephthalein tests were done in all cases. The results of this test are detailed in a table. Its accuracy and ease of administration are far greater than those of the renal test. In the two-hour renal test the patient can render the procedure of no value by disobedience of orders, such as drinking a glass or two of water at night or by discarding some of the urine which should have been saved. Patients were kept in bed, as far as possible, as long as the urine showed much albumin. They wore flannel pyjamas and slept between blankets. The ward was kept warm and at an even temperature by stoves. All patients were given a litre of lemonade, without any other drink or food, on the first day. If they presented œdema or marked symptoms this was continued for another 24 hours. A few with high blood pressure or dyspnœa were bled from 500 to 600 c.cm., with marked relief. As nearly as possible patients were put on a salt-free diet. Fluids were restricted to about 1,000 or 1,200 c.cm. in the 24 hours. No meat was given, but occasionally the patients who were improving rapidly received an egg several times a week or a little chicken. Most of the patients stayed from a month to six weeks. Recurrences were rare. Twenty were discharged apparently well, 19 showed traces of albumin and casts, but without any other symptom; five were improved, but still had a serious kidney condition. One patient died and the autopsy disclosed an acute, diffuse nephritis.

(93) Calcium Chloride in Intestinal Tuberculosis.

Maurice Fishberg observes that, with the exception of dysphagia and dysphonia, due to laryngeal implication, the intestinal symptoms of tuberculosis are the most painful to endure and most difficult to control by present methods (*Journ. Amer. Med. Assoc.*, June 28, 1919). Patients with advanced pulmonary tuberculosis often beg for relief of the abdominal pains, exhausting diarrhœa and tenesmus. They often state that, if these intestinal symptoms were controlled, they would be happy. The various astringents—metallic, mineral and vegetable—often prove of little or no value. Silver nitrate, lead, bismuth and tannin have failed in the vast majority of cases. Dietetic treatment is only exceptionally effective in checking the frequency of the stools. Only large doses of opium or its derivatives are at times productive of some relief; but no sooner are the opiates stopped than the diarrhœa reappears, at times more severe and exhausting than before. Between 30% and 50% of patients with advanced and active tuberculosis suffer from intestinal complications. Saxtorph, about six months previously, had published his results with the intravenous injection of calcium chloride in intestinal tuberculosis. The author gave this method a trial and recommends it as a valuable therapeutic agent in the treatment of this condition. He gives detailed reports of cases relieved by one or two injections (intravenous) of a 5% solution, as well as two cases in which repeated injections failed. It appears that calcium chloride is effective only in cases of early intestinal tuberculosis. When the diarrhœa has continued only a few weeks it may be checked more readily in this way than by any other medication or dietetic changes hitherto practised. In some cases even the abdominal pain may be removed by calcium chloride. In cases in which there are symptoms and signs of amyloidosis, enlarged liver, polyuria, etc., the intestinal symptoms are not relieved. When the diarrhœa is due to dietetic indiscretions or

catarrh of the intestinal mucosa or slight intestinal ulceration, an injection of 5 c.cm. of a 5% solution will give prompt relief. In cases of extensive ulceration, or amyloid infiltration of the intestine, the chances of attaining relief of the pain and diarrhœa are remote.

NEUROLOGY.

(94) The Genesis and Significance of Spasticity.

F. M. R. Walshe (*Brain*, Vol. XLII., Part I., 1919) discusses spasticity and the functional relations of the pyramidal system in their bearings upon the principles of physiology enunciated by Sherrington. He has previously advanced evidence that there are two clinical types of spasticity, as seen in the lower limb, the extended and the flexed. The extended type, wherein the limbs lie fully extended with the feet plantar flexed, is seen in hemiplegia, or in any spastic paralysis confined to the pyramidal system. The flexed type, with flexed position and flexor spasms of great frequency and violence, is seen in severe spinal lesions. The extended type may be identified with "decerebrate rigidity"; the flexed type with the "spinal man." The extended type is not only analogous to "decerebrate rigidity," but is an expression of activity of the proprioceptive system (Sherrington) as a whole. This system induces a tonic reflex, which, unmasked in the decerebrate animal, has been shown to possess the significance of a postural reflex—reflex standing. In man, the rigidity seen in hemiplegia has the same significance. There is an anomaly, however, inasmuch as the upper limb shows an attitude of flexion, the hypertonus being resident in the flexors, not in the extensors, as in the lower limb. This may be traced to the altered functions the upper limb exercises in man and to its complete lack of the locomotor function. Walshe denies the accuracy of Förster's theory of the origin of spasticity, namely, that "the pyramidal tract exercises both excitatory and inhibitory functions," because it disregards the fundamental principles laid down by Hughlings Jackson and Sherrington and because it is neither in accordance with those processes of reciprocal innervation which are evidenced by motor cortex reactions, nor with modern conceptions of the nature and origin of muscle tone. Reflex movements and spasticity stand in no causal relation to one another, but are both the result of loss of cerebral control over lower level reflex systems. The cerebellum may be an important link in the reflex arc, subserving the rigidity of hemiplegia. Indeed, the "complementary inverse" of spastic paralysis of cortico-spinal origin may be sought in lesions involving the cerebellum. In the production of spasticity the cortico-spinal system is supreme. The view attributing the tremor-rigidity syndrome of *paralysis agitans* and other organic cerebral lesions to uncontrolled cortical action is not established and is contra-indicated by such knowledge as is possessed of the normal activity of the motor cortex. Ramsay Hunt's speculations on the functions of the *corpus striatum* are quite incompatible with the facts of physiology.

(95) Unsuspected Nervous Disease in Syphilis.

Fildes, Parnell and Maitland (*Brain*, Parts III. and IV., 1918) write of syphilis as it affects the nervous system in the early stages of the disease. "With increasing investigation of early cases of syphilis by neurologists, it began to be suspected that affections of the nervous system were not uncommon in such patients, although they did not necessarily lead to pronounced symptoms. Evidence then began to accumulate that such affections as were clinically detectable, were in reality only a fraction of those which really existed; that the nervous system was frequently attacked without any outward indication of this being manifest." The writers have confirmed the foregoing by the systematic examination of 624 syphilitic men at Haslar Hospital, of whom the majority were in the early stages of infection and showed no obvious signs of nervous disease. Of these, 18% showed undoubted evidence of an abnormal condition of the nervous system. The signs were, first and most important, a pleocytosis—10 or more cells per cubic millimetre—of the cerebro-spinal fluid, proving the existence of a syphilitic meningitis; and secondly, in a certain proportion of cases, either lesions of the eye-grounds, indicating a beginning retinitis, or disordered function of the internal ears. There was a progressive increase of incidence of these signs up to the secondary stage of infection, but a slight decline in the later secondary, followed by a decided increase in the later so-called latent stage. It is remarkable that few of the men complained of any disability, even when the meningitis was so acute as to produce a visible opalescence in the cerebro-spinal fluid. Anti-syphilitic treatment usually, but not invariably, ameliorated the condition. The importance of lumbar puncture as a routine in the examination of all cases of syphilis is emphasized.

(96) The Cerebellar Gait.

Meyers (*Journ. Nerv. and Ment. Diseases*, January, 1919), following Marey, devised an apparatus for taking gait records of the dog and compared the records from a normal animal with those from a dog having an artificially-produced cerebellar lesion (*crus secundum* and *lobulus paramedianus*). Analysing these records, upon which much time and trouble had been expended, he found that there was neither asthenia in the muscles affected by the lesion nor arrhythmia in the sense indicated by Luciani (an unsteadiness or tremor in each single contraction of the affected muscles) but there was, as the essential change, arrhythmia of the affected limb in relation to the corresponding normal limb. This was exhibited by a hyperactivity of the extensors, so that the disordered limb extended and initiated the step earlier than the opposite limb. Further, in the diagonally opposite limb, there seemed to be an opposite effect. The latter fact might bear on the cerebellar gait in man, because the gait of man is in a way the same as that of quadrupeds. In both, as Pettigrew pointed out, there is a synchronous diagonalism in each pace, one arm and the opposite leg advancing and receding together. If a man walks with two sticks the movements are essentially quadrupedal. These movements of the arm in man serve to prevent excessive displacement of the centre of gravity and lateral deviation of the body during its advance.

(97) A Lesion in the Putamen.

Newmark (*Journ. of Nerv. and Ment. Dis.*, February, 1919) records the case of a man, advanced in years, who after a transient disturbance of articulation some time before, suffered an impairment in the use of the left extremities. The impairment took the form of a numbness or awkwardness in the action of the left hand and a loss of facility in moving the left toes and was associated with a slight tremor of the left hand on voluntary movement and of the lid when he shut the left eye. Inasmuch as the affection remained stationary for two and a half years, the rest of his life, *paralysis agitans* could be excluded. Anatomically, there was shrinkage of the putamen of the lenticular nucleus of the right hemisphere; many of its nerve fibres were degenerated and its area occupied by a mass of neuroglia and some cavities. Photomicrographs illustrating the change, are published. The lesion closely resembled what Wilson described in "progressive lenticular degeneration." The case may support Wilson's belief that the *corpus striatum* exercises a steadying effect upon the cortico-spinal system, the slightness of the symptoms being ascribable to the integrity of the *globus pallidus*, the actual symptoms, to the withdrawal of some influence which the putamen normally exercises upon the *globus pallidus*.

(98) War Trauma of the Spinal Cord.

Grimberg (*Journ of Nerv. and Ment. Dis.*, February, 1919), with an experience of 37 cases of war trauma of the spinal cord, frequently saw what he regarded as anomalies in the course of the symptoms. A severe paralysis might clear up in a few days and leave a slight, improving monoplegia. There might be similar changes in regard to sensory disturbance, and so on. Without pretending that his study is complete, Grimberg thinks that he may dogmatize on two points. First, a war injury of the spinal cord alone cannot occur, by which he means that an injury of the spinal cord must be conceived as an injury of roots as well as cord. Secondly, war injuries of the spinal cord are almost invariably associated with œdema or hæmorrhage, which may be absorbed and in due course change the whole clinical picture,

British Medical Association News.

MEDICO-POLITICAL.

A meeting of the Queensland Branch was held at the B.M.A. Rooms, Adelaide Street, Brisbane, on August 22, 1919, Dr. A. Sutton, the President, in the chair.

A letter from the Cremation Association was read. The Association invited the Queensland Branch to approach the Government with the request to erect a crematorium in Brisbane.

Dr. W. F. Taylor moved and Dr. R. Graham Brown seconded:—

> That the Queensland Branch of the British Medical Association form a deputation to wait upon the Premier and urge upon him the necessity for the Government to erect a crematorium in the interests of public health.

An amendment was moved by Dr. W. N. Robertson, with the support of Dr. A. B. Carvosso, to the following effect:—

> That the Queensland Branch of the British Medical Association supports the objects of the Brisbane Cremation Association and re-affirms the former resolution to that effect.

The resolution referred to has been published in *The Medical Journal of Australia* of February 19, 1916. The amendment secured the approval of the meeting and was adopted as a substantive resolution. It was determined to acquaint the Cremation Association with the terms of the resolution of the meeting.

Dr. G. Comyn proposed a motion of which he had given previous notice. It was to the effect:—

> That no regulations curtailing or limiting the unfettered practice of the general practitioner be endorsed by the Council, particularly in contagious diseases.

Dr. W. N. Robertson seconded the motion *pro forma*. After a full discussion the motion was put to the meeting and declared lost.

A scheme for the appointment of members of the honorary staff of the Brisbane General Hospital was submitted by the Council for consideration. Dr. J. C. Hemsley moved and Dr. J. Espie Dods seconded the adoption of the scheme.

Dr. F. Page considered that the report should be printed and circulated among the members, in order to give them a better opportunity of considering it carefully. This suggestion was adopted.

Dr. E. S. Jackson moved and Dr. J. Espie Dods seconded:

> That there should be attached to the circular referred to in the last resolution a suggestion that, other things being equal, preference shall be given to returned soldiers.

The motion was carried unanimously.

A discussion took place on the establishment of a medical school at the University of Brisbane. Dr. E. S. Jackson moved and Dr. W. N. Robertson seconded:—

> That in the interests of the University and of the proposed medical school and the future students of both, arrangements should be at once completed for the taking over of that portion of Victoria Park which is necessary for University purposes.

Dr. Jackson gave a short history of the endeavour to secure the Victoria Park site for the University. The Trustees of the Park had consented to hand over a sufficient area to the University, provided that they were indemnified by Act of Parliament. The necessary Bill had not been considered in Parliament, and, for some reason which he did not understand, it had been shelved. He pointed out the advantages of the site, which included its proximity to the city and to the various hospitals. Not only were the hospitals within a short distance of Victoria Park, but the same applied to the chief educational establishments of Brisbane. If a site some miles from the town were selected, it would entail a waste of the time of both students and lecturers. The motion was carried unanimously and the Honorary Secretary was instructed to forward it to the Senate of the University.

A discussion took place on the proposal that a resolution passed at a meeting of the Branch on August 7, 1914, should be rescinded. The motion referred to was as follows:—

> In view of the commercial depression resulting from the war and the need for mutual self-help, that the introduction of the new agreement between medical men and their lodges be deferred for the present.

It was moved by Dr. Page and seconded by Dr. C. A. Thelander:—

> That the resolution of August 7, 1914, be rescinded and that the Model Lodge Agreement as it stood at the outbreak of war be carried out in its entirety.

A discussion took place and the motion was carried.

Roland Gordon Banks-Smith, Esq., M.B., Ch.M., 1918 (Univ. Sydney), of "Balmoral," Watson's Bay, Sydney, has been nominated for election as a member of the New South Wales Branch.

MEDICAL OFFICERS' RELIEF FUND (FEDERAL).

The Trustees acknowledge, with thanks, the following donations and promises towards the Medical Officers' Relief Fund and beg to intimate that War or Peace Bonds may be sent in lieu of cash:—

(THIRD LIST.)

	£	s.	d.
New South Wales.			
A.M.C. Comforts' Fund, *per* Lady Anderson Stuart (President) and Miss Amphlett (Honorary Treasurer)	308	11	9
Dr. A. Davidson	100	0	0
Dr. W. F. Burfitt	100	0	0
Dr. H. R. Beatty	31	10	0
Dr. Eric Pockley	31	10	0
Dr. C. P. B. Clubbe	30	0	0
F.R.C.S.	30	0	0
Dr. H. E. Lee	26	5	0
Dr. H. H. Bullmore (first donation)	25	0	0
Dr. M. C. Lidwill	20	0	0
Dr. P. L. Hipsley	20	0	0
Dr. E. H. Thane	15	15	0
Dr. L. R. Parker	15	15	0
Dr. A. J. Opie	10	10	0
Dr. S. A. Alcorn	10	0	0
Dr. P. G. Cooley	5	5	0
Dr. H. W. Cuthbert (additional)	4	4	0
Dr. E. C. Chisholm	2	2	0
Queensland.			
Dr. W. N. Robertson	250	0	0
Sir David Hardie	100	0	0
Dr. Aeneas McDonnell	100	0	0
Dr. J. Cameron Hemsley	50	0	0
Dr. E. A. Falkner	30	0	0
Dr. C. F. Marks, M.L.C.	25	0	0
Dr. Eustace Russell	21	0	0
Dr. J. Espie Dods, D.S.O.	20	0	0
Dr. F. G. Meade	20	2	0
Dr. T. Davies	20	0	0
Victoria.			
Dr. G. A. Syme	100	0	0
Dr. T. R. Davis	60	0	0
Dr. A. V. M. Anderson	60	0	0
Dr. H. Spence	20	0	0
Dr. D. M. Embelton	20	0	0
Dr. D. Trumpy	5	0	0

Total to September 9, 1919, £5,503 9s. 9d.

FOULERTON STUDENTSHIPS IN MEDICAL RESEARCH.

The following cablegram has been received from the High Commissioner for Australia, London, by the Prime Minister:

> Royal Society, Burlington House, London, inviting applications returnable with them October 31 next for two Foulerton studentships, £400 per annum each, open both sexes, tenable three years first instance, or total six years on extension. Studentships are for original research in medicine, improvement in treatment of disease and relief of human suffering. Candidates must state age, qualifications, research, give not more than three references as to previous work and experience in research, prove British nationality self, father and paternal

grandfather, state whether they hold other endowments, also general nature and scope of proposed research, and those desiring undertake duties outside research must obtain Society's permission. Applications to be marked outside: "Foulerton Studentship."

Medical Societies.

MELBOURNE HOSPITAL CLINICAL SOCIETY.

A meeting of the Melbourne Hospital Clinical Society was held at the Melbourne Hospital on July 23, 1919. In the absence of the President, Dr. John Gordon, Mr. G. A. Syme was voted to the chair.

Dr. Paul Dane presented a female patient, whom he had shown some months previously and in whom he had then demonstrated a peculiar spasm of the muscles of the pelvic girdle simulating hip disease of the right side. He had since localized the spasm in the *tensor fasciæ femoris* and had obtained complete relaxation of this muscle by placing the limb in a position of full abduction. In this position the hip joint was found to move very well. This fact he had demonstrated to the patient and in subsequent treatment maintained progressively less abduction. The patient, having been convinced of the free mobility of the hip joint, was now walking without a stick.

Dr. Dane, in demonstrating the condition, pointed out that it had been formerly impossible to rotate or abduct the limb without inducing a "clicking" sound, which he had attributed to the passage of the *tensor vaginæ* in a state of spasm over the great trochanter. He had recently learned that this girl's sister had suffered from an affection of the knee some years ago and, although she had been told it was tuberculous, a complete and sudden cure had by some means been effected.

Dr. S. P. Croom exhibited the case of a sailor, who had sustained a cut on the nose in the course of a fight with another sailor. The wound had healed in a week, but two weeks later some induration had manifested itself and the wound commenced to ulcerate.

Various applications had been of no avail in promoting healing. The Wassermann reaction was positive and it had been found subsequently that the patient's opponent in the fight referred to was probably syphilitic. He thought that the lesion was possibly a primary chancre and, if this were the case, it was interesting from the point of view of the manner in which it was contracted.

Mr. B. T. Zwar asked whether the Wassermann reaction would be positive so early if the ulcerating sore were a primary lesion. In view of the co-existent ulcer on the neck and the positive Wassermann reaction, he was much inclined to favour the diagnosis of tertiary syphilis. Gummatous infiltration and ulceration had been observed not infrequently after trauma in tertiary syphilitics. He thought that three weeks was perhaps a short incubation period for syphilis.

Dr. Reginald Webster remarked that the question need not remain long in doubt. Spirochætes would in all probability be readily detected in the exuded serum, by dark ground illumination or other convenient method, in the event of the condition being a primary sore. On the other hand, it was improbable, though not impossible, that *spirochætæ pallidæ* would be thus detected in a tertiary lesion.

Mr. G. A. Syme recollected an experience some years ago in London. The occasion was the exhibition by an eminent surgeon of a case of "wool-sorters'" disease in a man who was a worker among hides. The surgeon had placed a list of possible conditions on the blackboard and proceeded to the elimination of all but "wool-sorters'" disease. When it was pointed out that tertiary syphilis had not been considered, it was stated that the patient denied the possibility of syphilis. Subsequently, however, he admitted having contracted syphilis some years before. Mr. Syme considered that, in the case before the meeting, the glandular enlargement constituted a point of evidence in favour of primary syphilis.

Dr. Sidney Pern brought forward a patient in whom he considered there was some derangement of the internal secretions, although the exact type of disorder appeared very obscure. His patient had been described as having been "different from other boys" at the age of seven; though fairly clever at his school work, he had always been a butt for jokes. At the age of fifteen he began to grow very rapidly and had become very tall and thin. He had been plump as a boy, but never manifested the extreme adiposity associated with certain pituitary conditions. At the present time he was very depressed, with a poor outlook on life; he became fatigued very easily, and there was some perversion of sex. He constantly complained of "something in his head," which he could not describe. There was present a distinctly enlarged thyroid and, in Dr. Pern's opinion, probably an enlarged thymus. The hands and feet were long, but scarcely acromegalic, nor was there any suggestion of prognathism in the mandible. The X-ray photograph of the skull showed a small sella, with the clinoid processes approximating.

Dr. P. G. Dane remarked that the skin was fair, soft and moist and in these respects suggested increased thyroid activity. The well-known psychoses observed in pituitary conditions were approached by the fits of irritation and depression to which the patient was subject. He agreed with Dr. Pern that the pathological process was to be located in the endocrine glands, but found it extremely difficult to refer this case to any definite class of internal secretion disorder.

In reply to a question relating to the symptoms of hypo- and hyper-function of the pituitary body, Dr. Pern mentioned some recent work carried out by Timme, of the Neurological Institute, New York. This observer, by studying a certain class of case over a period of some years, had been able to establish a definite syndrome and clear up much that had formerly been obscure relating to hypo- and hyper-function of the pituitary. The first stage was noticed in children manifesting undeveloped sex organs, enuresis, a tendency to fatness and great susceptibility to fatigue. Patients in the second stage (male) showed pubic hair of the female type and scanty or absent axillary hair. There was delayed menstruation in females at the corresponding period in the course of the affection. Again, great liability to fatigue was a feature. At this stage, as revealed by X-rays, the sella was small and apparently enclosed by the clinoid processes; the thymus was often seen by radiographic examination to be enlarged. The second stage was further characterized by rapid growth, perhaps 12.5 to 15 cm. in a year, low blood pressure and low sugar content of the blood. The third stage supervened at about the age of twenty and was a period in which signs of compensatory activity developed. Growth up to 183 cm. or more was often attained; extreme weakness, with apparently well developed muscles was a feature; enlargement of the hands and feet became evident and intra-temporal headaches very severe. The blood pressure and sugar content persisted at a low level, but X-ray examination now showed absorption of clinoid processes and deepening of the cavity. The fourth stage developed during a period up to ten years later. It was the period of complete compensation, with well marked acromegaly. The headaches were now absent and the blood pressure and blood sugar at a normal level. The sella was large and the tendency to fatigue greatly improved. In uncompensated cases the sella remained small, headaches became progressively worse, epileptiform fits supervened and there was an increase in weight and "fatiguability." Timme attributed the headaches to the pressure exerted by the hypertrophic pituitary upon the sella. Much relief could be afforded during the compensating state by pituitary feeding. Other forms of acromegaly, such as were produced by cysts, adenoma or adeno-sarcoma, were often of a hairy type and not necessarily tall.

Dr. Frank Andrew showed the case of a woman exhibiting a syndrome which he would describe and which was sequent on cerebro-spinal meningitis, contracted by the patient during the recent epidemic. He had brought the case forward in the hope that other clinicians, should they encounter similar types in the course of their work at the Hospital, would afford him an opportunity of investigating them. The female patient to whom he would direct attention, appeared in his clinic some twelve months before, after recovery from cerebro-spinal meningitis. She was absolutely deaf (nerve deafness) and was suffering severe headache. Nystagmus was obvious, but perhaps the chief source of trouble to the patient was the persistent tinnitus.

Dr. Andrew proceeded to say that he thought a description by Bárány of local cystic conditions of the meninges, prone to affect the cerebello-pontine angle and following suppurating mastoids and labyrinths, had some bearing on the condition of the patient he was presenting. Bárány had found that opening of the skull and application of massage to the dura over the affected area frequently resulted in relief of symptoms. Dr. Andrew, regarding it as quite feasible that a similar condition of local cystic meningitis was persistent after the cerebro-spinal meningitis in his patient, had applied the work of Bárány, and the site of the incision could be inspected in the patient before the meeting.

As to the result obtained, the deafness had, of course, persisted, but the tinnitus and vertigo had disappeared. Dr. Andrew pointed out that the operation "involved no stake"; there was no incision in the dura and no risk of *hernia cerebri*. If the operation secured even a measure of relief it was worth while. In regard to the case he had just shown, he would like to mention that repeated attempts at lumbar puncture had invariably resulted in a "dry puncture"; no doubt the theca was the site of numerous adhesions after the meningitis.

Dr. Andrew's second case was another instance of very distressing tinnitus, of the nature of a more or less continuous hum, interspersed at intervals with loud, crashing noises. After some consideration he had come to regard the diagnosis as lying between otosclerosis and a sacculated meningitis in the cerebello-pontine angle. The Wassermann test, applied to both the serum and cerebro-spinal fluid, yielded a negative result. The patient urgently desired relief from the noises and headache.

Babinski had pointed out that lumbar puncture would relieve tinnitus and headache, at the same time noting that a liberal lumbar puncture was sometimes followed by an aggravation of headache, accompanied by vomiting. These symptoms were but transitory, however, and were followed by pronounced and prolonged improvement. The suggestion was that cases of tinnitus and headache behaving in this manner after lumbar puncture depended on a local, sacculated meningitis in the cerebello-pontine angle. Rupture of the cyst was induced by the spinal puncture, the rupture leading to the intracranial crisis.

In the case he was exhibiting, lumbar puncture had been performed three weeks before, when the rapid delivery of 35 c.cm. of cerebro-spinal fluid seemed to be an indication of an increased pressure. The exacerbation of headache, with vomiting, above described had not occurred. Partial relief had followed, in that the crashing tinnitus had all gone, but the fine noises and headaches persisted. He proposed a further lumbar puncture and hoped thereby to secure a longer period of relief.

Dr. L. J. Clendinnen showed in the first instance a man with a very extensive papillomatous condition of the palate. The case had been before the Society in 1918, and he now wished to show the result of treatment by radium.

Dr. Croom, by whom the patient had been referred originally to Dr. Clendinnen, commented on the good result obtained by the radium treatment. Formerly the roof of the mouth had been a mass of warty growths; he had regarded the condition as inoperable surgically, and thought that the improvement under radium had been very rapid.

Mr. Syme remarked that he had seen other cases of palatal papillomata improved by radium. However, this was not the invariable result, and he had met with some that had failed to respond to radium treatment.

Dr. Clendinnen then presented the case of a man who had been operated upon for the removal of an epithelioma of the lip, with cervical glands affected. The dissection of the glands was carried out as a second operation and five weeks later definite induration appeared in the scar. This subsided under radium, but as enlarged glands had now appeared on the other side of the neck, he sought a surgical opinion.

Mr. Syme remarked that after an extensive experience he was still in some doubt as to what was the best procedure in dealing with epithelioma of the lip. No doubt it was possible to excise the growth on the lip, to leave the glands and to get no further trouble. In some cases in which he had removed the glands very extensively, he had obtained a pathological report to the effect that the glands showed no malignant invasion. In other instances, perhaps when the glands had not been conspicuously enlarged, the pathological report had been "positive." If the glands were enlarged and palpable, there was no question as to the necessity for their removal. He had never obtained a negative pathological report in the cases of enlarged and palpable glands. The advantage of radium treatment from the patient's point of view was that it was less deforming, but he questioned whether radium or X-rays could be relied upon to remove malignant processes in the cervical glands. There were some difficult practical questions involved. Latterly he had been removing the glands of both sides of the neck as completely as possible.

In former times, when the epithelioma only was removed, there was frequently no trouble subsequently; other cases advanced and in this, as in other forms of malignancy, for example, breast carcinoma, there was great variability in the course pursued.

The meeting concluded with a demonstration of pathological specimens by Dr. Morgan.

(1) Chronic indurative valvulitis, with recent ulcerative endocarditis; rupture of a valve segment (aortic); influenza twelve weeks previously; Wassermann reaction, partial.

(2) Ulceration of rectum and descending colon; *B. morgan.* (No. 1) infection, with septicæmia.

(3) Tuberculosis of the breast; retraction of the nipple, simulating scirrhous carcinoma.

(4) Mediastinal sarcoma, with some features of chloroma.

Naval and Military.

APPOINTMENTS.

The following announcements are reproduced from the *Commonwealth of Australia Gazette*, No. 105, of August 28, 1919:—

Australian Imperial Force.

TERMINATIONS.

Third Military District.

Lieutenant-Colonel C. G. Shaw, D.S.O.. Dated 29th June, 1919.
Captain O. A. Field. Dated 18th June, 1919.
Captain J. Warne. Dated 16th July, 1919.

Fourth Military District.

Major W. R. C. Mainwaring. Dated 5th September, 1919.
Major L. A. Hayward. Dated 2nd September, 1919.
Captain J. E. McGlashan, M.C.. Dated 8th August, 1919.

Fifth Military District.

Lieutenant-Colonel A. J. H. Saw. Dated 31st July, 1919.
Captain O. F. Paget. Dated 5th July, 1919.

Australian Military Forces.

GRANT OF HONORARY RANK.

The undermentioned, who have served in the Australian Imperial Force as Commissioned Officers, having the rank held by them in the Australian Imperial Force, confirmed as honorary rank in the Australian Military Forces, as follows:—

Officer who, on appointment for active service outside Australia, was serving and is now serving in the Australian Military Forces.

Fourth Military District.

To be Honorary Lieutenant-Colonel—

Honorary Major T. G. Wilson, Australian Army Medical Corps Reserve. Dated 15th May, 1916.

Officers who, on appointment for active service outside Australia, were not serving in the Australian Military Forces.

Third Military District.

To be Honorary Major—

W. A. Morton. Dated 20th June, 1917.

To be Honorary Captain—

R. L. Forsyth. Dated 17th March, 1916.

Fifth Military District.

To be Honorary Captain—

A. Juett. Dated 1st March, 1916.

In the *Commonwealth of Australia Gazette*, No. 107, of September 4, 1919, the following appointments, promotions, etc., are announced.

Australian Imperial Force.

Second Military District.

Captain C. Anderson, M.C., Australian Army Medical Corps, to be Deputy Assistant Director Medical Services, Australian Mounted Division, *vice* Major W. Evans, M.C., Army Medical Corps, to Australia. Dated 25th December, 1918.

Third Military District.

Lieutenant-Colonel R. Fowler, O.B.E., Australian Army Medical Corps, to be Assistant Director Medical Services, Australian Mounted Division, *vice* Colonel G. P. Dixon, C.B.E., A.A.M.C.. Dated 23rd July, 1918.

Captain A. B. McCutcheon, First Australian General Hospital, Army Medical Corps, Medical Officer, to be Registrar, and to be temporary Major whilst so employed, *vice* Major K. McK. Doig, M.C.. Dated 28th April, 1919.

Fourth Military District.

Lieutenant-Colonel (temporary Colonel) H. K. Fry, D.S.O., Army Medical Corps, Medical Officer, relinquished the temporary rank of Colonel on ceasing to perform the duties of Assistant Director, Medical Services, Fifth Australian Division. Dated 21st April, 1919.

APPOINTMENTS TERMINATED.

First Military District.

Major T. C. C. Evans, D.S.O.. Dated 12th September, 1919.

Captain A. T. H. Nisbet. Dated 4th August, 1919.

Third Military District.

Major T. F. Brown, D.S.O.. Dated 5th May, 1919

Captain R. G. Woods. Dated 26th July, 1919.

Captain H. G. D. Bredall. Dated 11th June, 1919. (This amends the reference to Captain H. G. D. Bredall, which appeared in Executive Minute 531/1919, promulgated on page 1180 of *Commonwealth of Australia Gazette*, No. 92. Dated 24th July, 1919.)

Fourth Military District.

Lieutenant-Colonel C. Yeatman, O.B.E.. Dated 2nd September, 1919.

Australian Military Forces

GRANT OF HONORARY RANK.

The undermentioned, who have served in the Australian Imperial Force as Commissioned Officers, having the rank held by them in the Australian Imperial Force confirmed as honorary rank in the Australian Military Forces as follows:—

Officers who, on appointment for active service outside Australia, were serving, and are now serving, in the Australian Military Forces.

First Military District.

To be Honorary Major—

Honorary Captain P. E. Voss, M.C., Australian Army Medical Corps Reserve. Dated 11th November, 1918.

Second Military District.

To be Honorary Lieutenant-Colonel—

Captain R. S. McGregor, D.S.O., Australian Army Medical Corps. Dated 1st May, 1918.

To be Honorary Majors—

Captain L. W. Bond, D.S.O., Australian Army Medical Corps. Dated 14th November, 1916.

Captain J. S. Smyth, Australian Army Medical Corps. Dated 27th April, 1917.

Honorary Captain E. B. M. Vance, Australian Army Medical Corps Reserve. Dated 1st March, 1916.

Captain A. V. Meehan, Australian Army Medical Corps. Dated 27th April, 1917.

Officers who, on appointment for active service outside Australia, were not serving in the Australian Military Forces.

Second Military District.

To be Honorary Major—

D. J. Glissan. Dated 12th October, 1917.

To be Honorary Captain—

P. J. F. O'Shea, M.C.. Dated 6th September, 1916.

Third Military District.

To be Honorary Major—

J. H. Downing. Dated 24th August, 1917.

Fourth Military District.

To be Honorary Majors—

E. J. Brown. Dated 8th October, 1915.

C. H. Kellaway, M.C.. Dated 10th September, 1918.

Our attention has been called to an entry in the *Commonwealth of Australia Gazette*, No. 92, of July 24, 1919, to the effect that the appointment of Captain A. McInnes in the Australian Imperial Force was terminated on June 6, 1919.

We understand that the spelling of the name is incorrect and that the entry has reference to Captain Angus MacInnes, who was transferred from the Australian Army Medical Corps Reserve to the Army Medical Corps, Australian Imperial Force, on July 20, 1915.

Public Health.

NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the seven weeks ending August 30, 1919:—

	Metropolitan Combined District. Cs.	Dths.	Hunter River Combined District. Cs.	Dths.	Rest of State. Cs.	Dths.	Total. Cs.	Dths.
Enteric Fever	37	1	0	0	6	3	43	4
Scarlatina	48	1	0	0	38	0	86	1
Diphtheria	119	8	29	1	147	9	295	18
*Pulmonary Tuberculosis	105	95	6	5	56	3	167	103
Cerebro-Spinal Meningitis	1	0	1	0	4	2	6	2
Poliomyelitis	1	0	0	0	0	0	1	0
Malaria	9	0	0	0	0	0	9	0
†Pneumonic Influenza	1256	469	474	135	1838	850	3569	1454

* Notifiable only in the Metropolitan and Hunter River Districts, and, since October 2, 1916, in the Blue Mountain Shire and Katoomba Municipality.

† Notifiable up to August 8, 1919.

VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the nine weeks ending August 31, 1919:—

	Metropolitan. Cs.	Dths.	Rest of State. Cs.	Dths.	Total Cs.	Dths.
Enteric Fever	2	0	5	1	7	1
Scarlatina	147	3	145	1	292	4
Diphtheria	425	22	367	15	792	37
Pulmonary Tuberculosis	175	80	50	25	225	105
C'bro-Spinal Meningitis	4	1	3	0	7	1
Puerperal Fever	2	1	3	0	5	1
Influenza	551	—	306	—	757	—

QUEENSLAND.

The following notifications have been received by the

Department of Public Health, Queensland, during the nine weeks ending August 30, 1919:—

Diseases.	No. of Cases
Enteric Fever	28
Scarlatina	46
Diphtheria	334
Pulmonary Tuberculosis	58
Poliomyelitis	7
Erysipelas	20
Meningitis	2
Puerperal Fever	6
Pneumonia	81
Influenza	13460
Continued Fever	1
Bilharziosis	1

SOUTH AUSTRALIA.

The following notifications have been received by the Central Board of Health, Adelaide, during the eight weeks ending August 23, 1919:—

	Adelaide.		Rest of State.		Total.	
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.
Enteric Fever	0	0	2	1	2	1
Scarlatina	4	0	188	0	192	0
Diphtheria	18	11	208	11	225	22
Pulmonary Tuberculosis	9	18	37	47	46	65
Erysipelas	3	0	12	1	15	1
Morbilli	2	0	336	1	338	1
Pertussis	0	0	64	0	64	0
C'bro-Spinal Meningitis	0	0	1	1	1	1
Puerperal Fever	0	0	2	2	2	2
Malaria	0	0	1	0	1	0
Influenza	135	24	1741	66	1876	90

WESTERN AUSTRALIA.

The following notifications have beeen received by the Department of Public Health, Western Australia, during the month of July, 1919:—

	Metropolitan. Cases.	Rest of State. Cases.	Totals. Cases.
Enteric Fever	5	9	14
Scarlatina	44	30	74
Diphtheria	56	30	86
Pulmonary Tuberculosis	18	10	28
Malaria	41	1	42
Beri-beri	0	1	1
Tubercular Meningitis	1	0	1
Erysipelas	1	1	2
Hæmaturia	0	1	1
Pneumonic Influenza	664	66	730

TASMANIA.

The following notifications have been received by the Department of Public Health, Tasmania, during the six weeks ending August 9, 1919:—

Diseases.	Hobart. Cases.	Launceston. Cases.	Country. Cases.	Whole State. Cases.
Enteric Fever	3	1	8	12
Scarlatina	2	2	1	5
Diphtheria	14	39	111	164
Pulmonary Tuberculosis	9	5	14	28
Puerperal Fever	1	1	1	3

PNEUMONIC INFLUENZA.

In the *Queensland Government Gazette* of August 30, 1919, an order is published imposing the usual influenza restrictions on persons within the towns of Bowen, Cairns and Warwick and the Shires of Cairns, Etheridge, Herberton, Nebo, Rosewood, Walsh and Wangaratta, and the townships of Silverspur, Texas and Yelarbon and Divisions 1 and 3 of the Shire of Barron. The restrictions imposed on persons in the town of Bowen and in the Shire of Walsh, are removed by an order issued on September 4, 1919.

University Intelligence.

THE UNIVERSITY OF SYDNEY.

A meeting of the Senate of the University of Sydney was held on August 11, 1919, at University Chambers, Phillip Street, Sydney.

Leave of absence for a period of twelve months, on account of ill health, was granted to Dr. B. Coen, full-time Demonstrator in the Department of Anatomy, and on the recommendation of Professor Wilson, Dr. A. N. St. G. H. Burkitt was appointed permanent Demonstrator in the Department of Anatomy.

The Chancellor proposed the following resolutions, which were adopted:—

(1) That in view of the strengthening of the finances through the magnificent bequest of Sir Samuel McCaughey, and of the fact that a new Senate will be elected soon after the return of the University men from the front by the end of October, the consideration of the proposals for the subdivision of the Chair of Modern Literature be deferred until next year.

(2) That in the meantime Professor MacCallum be invited to postpone his contemplated retirement until this matter has been dealt with.

(3) That His Excellency the Governor be requested to issue the necessary proclamation under the Act dissolving the Senate as now constituted, such dissolution and the new election consequent thereupon to be held on November 10, 1919.

(4) That taking into consideration the enlargement of the scope of University teaching which the bequest makes possible, the Government be urged to make immediate provision for such buildings as the present needs demand, as well as for the further accommodation which the creation of new chairs will render necessary.

(5) That in the meantime the various Faculties be requested to enquire and report through the Professorial Board, whose recommendations are to be subjoined upon the best method of applying the bequest of Sir Samuel McCaughey for the purposes mentioned in the previous reports or any other branch of University expenditure within the terms of the bequest which may commend itself to them.

Correspondence was read from Messrs. Macnamara and Smith, notifying the bequest of the late Sir Samuel McCaughey to the University.

It was resolved that a letter of appreciation for the bequest be forwarded.

The application of the Royal Military College, asking the University to conduct examinations, was referred to the Professorial Board to carry out the details of the examination.

An invitation was received from the University of Otago, asking that the University of Sydney might be represented at the Jubilee Celebrations to be held from February 3 to 7, 1920. It was resolved that the invitation be accepted and that a suitable address be prepared.

The Honourable Mr. Justice Street and Mr. H. C. L. Anderson were appointed *ex officio* members of the Women's College.

The following report from the Faculty of Medicine, recommending the conditions of award of the Dr. John Osborne, R.N., Scholarship, was adopted.

(1) That such scholarship be awarded for general proficiency at matriculation; and that it be tenable for a period of two years in the Faculy of Medicine so long as the scholar shall be of good conduct and shall attend regularly the courses in the University for candidates for the degrees of Bachelor of Medicine and Master of Surgery, and shall satisfactorily pass the prescribed examinations.

(2) Failure to pass any qualifying examination will entail forfeiture of the scholarship unless such failure be due to illness or special circumstances. The decision in all such cases shall be made by the Senate after receiving a report from the Faculty of Medicine.

(3) The scholarship is tenable only by a student of St. Paul's College.

A report from the Faculty of Science on the proposed science classes at the Teachers' College was adoped.

It was resolved, on the recommendation of Professor Anderson, that Dr. G. E. Phillips be appointed Lecturer in Psychology for the remainder of the year.

It has been announced that Dr. W. J. Young, who has held the position of bio-chemist at the Australian Institute of Tropical Medicine since its foundation in 1910, has been appointed Lecturer on Bio-chemistry at the University of Melbourne. Dr. Young, who is a graduate in science, was for several years Assistant to Dr. Arthur Harden, the head of the Bio-chemical Department at the Lister Institute.

His Excellency the Governor of South Australia has appointed Dr. F. S. Hone to be a member of the South Australian Medical Board. He fills the vacancy created by the resignation of Dr. T. Borthwick.

Obituary.

LIONEL BRAIM DALY.

The death of Lionel Braim Daly on August 6, 1919, added another to the list of victims claimed by the pandemic scourge which has ravaged our population of late months.

Lionel Braim Daly was born in Prahran, Victoria, in the year 1888; he was the eldest child and only son of Mr. and Mrs. A. R. Daly, of Riversdale Road, Hawthorn. He was educated at Wesley College and later at the Melbourne Church of England Grammar School. Proceeding to the University of Melbourne in 1907, he entered the medical school, whence he graduated in 1912 as M.B., B.S..

After qualifying, Lionel Daly held the appointment of Resident Medical Officer to the Women's Hospital, Melbourne, for a period of 16 months. At this institution he won high opinions from his seniors on the staff. A short term in residence at the Children's Hospital, Melbourne, preceded his departure for Warrambool, where he was appointed to the resident position at the local hospital. He left Australia in 1916 in response to the call for medical officers for the Royal Army Medical Corps and served for two years in France.

Although cut off at such an early age, Lionel Braim Daly may be said to have realized and accomplished a man's duty, in that he served his country faithfully when the testing time came. As a student he was genial and popular. The friend of his student days, Captain Eric Giblin, met his death on war service and many of his year made the great sacrifice.

Correspondence.

ANCHYLOSTOMIASIS IN NEW SOUTH WALES.

Sir,—In reference to your review of Stitt's "Diagnostics and Treatment of Tropical Diseases," I notice the passage: "It is unknown whether there have been any endemic cases in New South Wales or Victoria." This sentence is in reference to anchylostomiasis.

Permit me to state that I have seen in the Tweed district during my time several cases of anchylostomiasis and have verified the diagnosis by microscopical examination of the fæces, in which the typical eggs were present. The patients were natives of the district and the disease was therefore endemic.

Yours, etc.,

H. ALBERT GOLDSMID.

Murwillumbah, Tweed River,
August 28, 1919.

SCORBUTUS OUTBREAK IN IDIOT COTTAGES.

Sir,—Dr. Russell's experience in this matter (*vide The Medical Journal of Australia*, August 30, 1919) is valuable evidence in favour of scorbutus being due to a contagious infection. The credit for the successful treatment of the cases reported by me (August 9, 1919) is not due to me, as Dr. Russell's letter suggests, but is due to Dr. Gamble, Medical Superintendent of Kew. My rôle was making the *post mortem* examinations and investigating the circumstances which appeared to be responsible for the outbreak.

Dr. Beattie Smith (Melbourne) has written to me, telling me of scorbutus which appeared in the main building at Kew, not the idiot cottages, when he was Superintendent of Kew years ago. The class of patient affected at that time was the "mince" patient, "chin on sternum slaverers," adult imbeciles. These cleared up with antiscorbutic treatment alone. Judging by recent literature the world over, there seems to be considerable uncertainty as to the actual cause of scorbutus. In making an investigation of this kind, it is very hard to distinguish the mothers' description of spongy gums or gingivitis from the scorbutic gum. The mother or nurse will say that such and such a child had "the same thing," meaning the scorbutic gum, and on investigation it proves to be spongy gums, to which the idiots are particularly susceptible, owing to dental caries. The gingivitis improves with a mouth wash and the scorbutic gum does not. The scorbutic gum improves with proper diet, the gingivitis does not. If the scent is not too stale, would it be possible for Dr. Russell to publish an extended account of the outbreak he had to contend against? By comparing the accounts of the two outbreaks we may arrive at further conclusions.

Yours, etc.,

W. A. T. LIND.

18 Walpole Street, Kew.
(Undated.)

LUMBAR PUNCTURE AND MENINGITIS.

Sir,—There have been reports lately of the danger of spinal puncture in various cerebro-spinal cases, and this danger was also mentioned in an editorial in our journal a few weeks back. Here it was mentioned that experiments on animals in the Johns Hopkins Medical School showed that meningitis could be caused by spinal puncture, after a septicæmia had been induced by intravenous injection of *Bacillus mucosus capsulatus*, and there seems to be evidence that the meningitis is not caused by direct injection by means of the needle track, but that the organisms in the blood invade the meninges as the result of alteration in the balance (possibly the pressure balance) between the circulating blood and the cerebro-spinal fluid.

In the last issue there is mention of six cases of *encephalitis lethargica* reported at a meeting of the Victorian Branch by Dr. Hiller.

Case I.—"A very mild case." No report of spinal puncture.

Case II.—No record.

Case III.—"The cerebro-spinal fluid was found to contain an excess of lymphocytes, and was under increased pressure. He died on the following day."

Case IV.—"The cerebro-spinal fluid was clear. . . . During the following night he became rapidly worse and died in the morning of the next day."

Case V.—No record of spinal puncture. "His condition was unaltered at the time of the meeting."

Case VI.—"Lumbar puncture revealed a clear cerebro-spinal fluid. . . . He died the following day."

As regards the danger of spinal puncture, though the argument of *post hoc, propter hoc*, does not necessarily hold in these cases, yet the record is at least suggestive of such puncture adding an increased risk.

Yours, etc.,

ERIC POCKLEY.

193 Macquarie Street, Sydney,
September 2, 1919.

Books Received.

SIR WILLIAM TURNER, K.C.B., F.R.C., Professor of Anatomy and Principal and Vice-Chancellor of the University of Edinburgh: A Chapter in Medical History, by A. Logan Turner, M.D.; 1919. Edinburgh and London: William Blackwood & Sons; Sydney: Angus & Robertson, Limited: Demy 8vo., pp. 514, illustrated. Price, 21s..

MOTHER LORE, by Maybanke Anderson (Mrs. Francis Anderson), 1919. Sydney: Angus & Robertson, Limited; Crown 8vo., pp. 109. Price, 3s. 6d..

MODERN MEDICINE AND SOME MODERN REMEDIES: Practical Notes for the General Practitioner, by Thomas Bodley Scott, with a Preface by Sir Lauder Brunton, Bart., F.R.S., Second Edition; 1919. London: H. K. Lewis & Co., Ltd.,; Crown 8vo., pp. 198, illustrated. Price 3s. 6d. net.

AUTŒROTIC PHENOMENA IN ADOLESCENCE: An Analytical Study of the Psychology and Psychopathology of Onanism, by K. Menzies, with a Foreword by Dr. Ernest Jones; 1919. London: H. K. Lewis & Co., Ltd.; Crown 8vo., pp. 88. Price 4s. 6d. net.

RUY BLAS, by Victor Hugo, Edited by H. L. Hutton, 1919. Oxford: at the Clarendon Press; Foolscap, 8vo., pp. 316.

NOTES ON GALVANISM AND FARADISM, by E. M. Magill, M.B., B.S., D.P.H., R.C.S.I., Second Edition; 1919. London: H. K. Lewis & Co., Ltd.; Crown 8vo., pp. 224, with 67 illustrations. Price 6s. net.

DISEASES OF WOMEN, by Ten Teachers, under the direction of Comyns Berkeley, M.A., M.D., M.C., F.R.C.P., Edited by Comyns Berkeley, H. Russell Andrews and J. S. Fairbairn; 1919. London: Edward Arnold; Royal 8vo., pp. 650, with 238 original illustrations.

Medical Appointments.

Dr. R. G. Burnard (B.M.A.), of South Australia, has been appointed a Public Vaccinator.

During the absence on leave of Dr. R. K. Bird (B.M.A.), Dr. E. F. Harbison has been appointed Officer of Health for the Shire of Arapiles, Victoria.

Dr. D. D. Cade (B.M.A.) has been appointed Officer of Health for the West Riding of the Shire of Dunmunkle, Victoria, in place of the late Dr. Rabl.

The appointment of Dr. W. A. Morton (B.M.A.) as Officer of Health for the Shire of Bulla, of Dr. J. H. Fleming (B.M.A.) for the East Riding of the Shire of Kowree and of Dr. C. Stanley (B.M.A.) for the East and North-East Ridings of the Shire of Stawell, Victoria, is announced in the *Victoria Gazette* of September 3, 1919.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xix.

University of Adelaide: Professor of Pathology.

Public Service Board, Sydney: Principal Medical Officer, Department of Public Instruction.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	All Friendly Society Lodges, Institutes, Medical Dispensaries and other Contract Practice. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Australian Natives' Association. Brisbane United Friendly Society Institute. Cloncurry Hospital.
TASMANIA. (Hon. Sec., Macquarie Street, Hobart.)	Medical Officers in all State-aided Hospitals in Tasmania.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	Contract Practice Appointments at Renmark. Contract Practice Appointments in South Australia.
WESTERN AUSTRALIA. (Hon. Sec., 6 Bank of New South Wales Chambers, St. George's Terrace, Perth.)	All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United Friendly Societies' Dispensary. Canterbury United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Friendly Society Lodges at Lithgow. Friendly Society Lodges at Parramatta, Auburn and Lidcombe. Leichhardt and Petersham Dispensary. Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. Newcastle Collieries—Killingworth, Seaham Nos. 1 and 2, West Wallsend. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society.
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

Sept. 16.—Tas. Branch, B.M.A., Branch and Council.
Sept. 16.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
Sept. 17.—Balmain District Med. Assoc. (N.S.W.) (Annual).
Sept. 17.—W. Aust. Branch, B.M.A., Branch and Council.
Sept. 23.—N.S.W. Branch, Medical Politics Committee; Organization and Science Committee.
Sept. 24.—Vic. Branch, B.M.A., Council.
Sept. 25.—S. Aust. Branch, B.M.A..
Sept. 26.—N.S.W. Branch, B.M.A., Election of two members to Federal Committee.
Sept. 26.—Q. Branch, B.M.A., Council.
Sept. 30.—Vic. Branch, B.M.A., Election of two members to Federal Committee.
Oct. 1.—Vic. Branch, B.M.A.
Oct. 3.—Q. Branch, B.M.A.
Oct. 3.—N.S.W. Branch, B.M.A.; Annual Meeting of Delegates of Local Associations with the Council (first day).
Oct. 4.—N.S.W. Branch, B.M.A.; Annual Meeting of Delegates of Local Associations with the Council (second day).

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney.